AN ACCOUNT OF THE WEATHER AND DISEASES OF SOUTH-CAROLINA.

By LIONEL CHALMERS, M. D.
Of CHARLES-TOWN, SOUTH-CAROLINA.

IN TWO VOLUMES.

VOL. II.

LONDON:
Printed for EDWARD and CHARLES DILLY.

M DCC LXXVI.


G.R. III.
BRITISH MUSEUM

TABLE OF CONTENTS.

Page

OF the anomalies in autumnal intermitting fevers - - - - - - - - - - 1

Of the jaundice from a colick - - - - - 12

Of the pituitous aſthma - - - - - - - 14

Of Dropſies - - - - - - - - - - - 15

Of ſome particular diſorders in the liver and ſpleen - - - - - - - - - - - - 21

Of tetanick complaints - - - - - - - 23

Of the teneſmus and dyſentery - - - - 31

Of the nervous colick - - - - - - - - 37

SECTION II.

Of the effects of the weather in autumn. Mediums of Farenheit's Thermometer in the ſhade and the rain alſo - - - - - - - 55

Of the rheumatiſm - - - - - - - - - 66

Of the ſuffocating or catarrhal peripneumony in children - - - - - - - - - - 69

Of nervous aſthma, or ſuffocatio ſtridula in children - - - - - - - - - - - 76

Further

Page

Further effects of the weather in the preſent ſeaſon - - - - - - - - - - - - 81

SECTION III.

Of the effects of the weather in winter. Mediums of the thermometer and rain for ten years - - - - - - - - - - - - - 83

Of quinſies - - - - - - - - - - - 87

Of the ſerous quinſy - - - - - - - - 99

Of other affections of the mouth and throat - 101

Of inflammatory pleuriſies and peripneumonies - 103

Of the catarrhal peripneumony, or peripneumonia notha - - - - - - - - - - - - 111

Of the ſpurious pleuriſy - - - - - - - 118

Of catarrhal fevers - - - - - - - - 119

Of the catarrhal conſumption - - - - - 121

Of coryzas - - - - - - - - - - - - 132

Of the apoplexy - - - - - - - - - - 134

Of the ſpaſmodical or convulſive aſthma - - 153

Of the hooping-cough - - - - - - - - 161

Of the gout - - - - - - - - - - - - 171

SECTION IV.

Of the effects of the weather in the ſpring. Mediums of the thermometer and rain for ten years - - - - - - - - - - - - - 200

OF THE

DISEASES IN SOUTH CAROLINA.

Of the ANOMALIES in Autumnal Intermitting FEVERS.

IF we except a long continuance of close, *sultry* and *moist weather*, *none* is more prenicious to mankind, than *that* which is cold, windy and damp. For, as no clothing can defend us from the penetrating nature of *moisture*, more especially when *this* is conveyed to us by a strong wind, so will it conduct that degree of coldness, which is received from the air, along with it to the skin. The effects of cold alone when applied to the outward surface of our bodies are, to augment the *elasticity* of the

ſolids, and condenſe the fluids; ſo that the latter ſhall then occupy a ſmaller ſpace. And their progreſs through thoſe veſſels that are *thus* ſtraightened, being obſtructed in proportion, to the ſtate of conſtriction they have been made to undergo, the blood muſt thereby be *thence* repelled and made to accumulate in others, which either are naturally lax and weak, or in thoſe that have not as yet undergone any conſiderable degree of conſtriction from that cauſe. And, *this* will, more eſpecially, happen in thoſe of the *abdominal viſcera* and *brain*, which are weak and unſupported. *Theſe* ſeem to be the moſt immediate *morbifick effects* of cold air, when it hath acceſs to the ſkin; to which a generally leſs free circulation, and an abatement in the *perſpiratory diſcharge*, even from the *lungs*, muſt neceſſarily enſue. But, if a judgement may be formed from the ſymptoms, that frequently occur in the fevers of this ſeaſon, it ſhould ſeem, that they *chiefly* affect the nerves at their *origins in the brain*, (owing perhaps, to their being compreſſed by the overcharged *ſanguiferous veſſels*) for the *vital* motions do not appear to be much diſordered for ſome time; or, the *nervous ſyſtem* being exceedingly irritable in the autumn, and more acutely ſenſible of ingrateful impreſſions, and the cool air acting, *mechanically*, as a *ſtimulus* on the extremities of the nerves, ſuſpending or abating their influence, ſo far as theſe impreſſions are made, the *vis nervea*, may thereby be unnaturally repelled from the external parts, towards the common *ſenſory*; where it may be collected as it were in ſo fixed a ſtate, that the patient ſhall be deprived both of *ſenſe* and *voluntary motion*, never more to be recovered, unleſs the *cauſe* that *obſtructed the intercourſe between the ſenſory and the ſeveral parts of the body* can be ſpeedily removed.

The

The ſame effects, probably, may be produced, by the *horrour which precedes a fever*, without having been immediaetly contributed to, by too long an expoſure to cold air. For, as that *ſhuddering* which we call a *horrour*, depends on a very general *convulſive conſtriction*, not only of the external *muſcular membranes*, but of the coats of the *ſanguiferous veſſels*, more or leſs of a ſuſpenſion, as it were in the *circulation* of the *blood*, in the parts that are thus affected, muſt enſue; ſo that they loſe their warmth, in proportion to the defect of mutual action between the ſolids and fluids. Should this failure of heat, be owing to the irritation of ſome internal morbifick acrimony, it may, perhaps, affect the nervous ſyſtem in the manner we ſuppoſed cold air does, when applied to the outward ſurface of the body; for the ultimate effects in both caſes, are nearly alike; and muſt be diſtinguiſhed by the obſervant practitioner.

Be theſe things as they may, the *chilline ſs* that commonly introduces a fever, is much more ſenſibly perceived now, than it was before *this* change happened in the weather. And the *ſpaſmodick contractions*, frequently, are ſo ſtrong on the external and extreme parts, that the *hands*, but more eſpecially the *feet* continue cold. At ſuch times the *head* ſuffers ſo remarkably, that it is common for the patients to become ſtupid and inſenſible, preſently after the diſeaſe attacks; and the ſpaſm by this time, ſeems to have extended even to the veſſels in the *abdominal viſcera* and *brain*. For, notwithſtanding the fluids being ſtrongly repelled into the interiour and ſuperiour parts, yet all the ſecretions from within, ſeem, now as it were, at a ſtand; for *that* intercourſe which ought to ſubſiſt between the *ſenſorium commune* and moſt other parts of the body, is intercepted, and no ſuitable excre-

tions are made, whereby the interiour and ſuperiour veſſels may be freed of the overfulneſs they ſuſtain. The fluids therefore become ſtill more accumulated in the *brain* and *viſcera*; and thus many people are loſt.

From ſome degree of a *morbifick conſtriction* acting on the *internal ſecreting organs*, whilſt at the ſame time their correſponding veſſels are *thus* unnaturally ſurcharged, it may probably be, that neither vomitings nor purgings are at this time ſo frequently ſeen in fevers. And *this* again may be one cauſe, why diſtreſſing *anxieties*, *ſtupors*, *convulſions*, *cataleptick* and *apoplectick ſymptoms*, *locked jaws*, *&c.* ſhould be ſo common under the circumſtances we ſpeak of; becauſe of the *plethorick* condition of the interiour and ſuperiour veſſels; for theſe ſymptoms are ſeldom or never ſeen, ſo early in fevers with a purging; at leaſt an inſtance of this kind never occurred to me.

So inſenſible are the patients ſometimes from the firſt onſet of a fever at this ſeaſon, even though *this* ſhould not appear palpably from the pulſe, that the moſt *ſtimulating medicines* and *painful applications* have no effects, till a *proper warmth* hath been reſtored to the extreme parts; very many lives being loſt, for want of attending to *this one circumſtance*. And nothing is more common in this country, than to hear of people dying in the ſpace of twenty-four hours or ſooner, of a *head-ache* only; for ſo they call one of the moſt dangerous diſtempers we are liable to. *

However

* The ſurpriſingly good effects that enſue from heated bodies, placed at a proper diſtance from the legs and feet, on ſuch and many other occaſions, confirm the reaſoning that often hath been mentioned in the foregoing pages. For the *morbifick conſtriction* there, being abated by the kindly warmth they

However dangerous theſe diſeaſes really are, they, for the moſt part, will be ſooner removed when taken in hand early, than thoſe who are unacquainted with the nature of them would expect. This is to be accompliſhed, by putting the patient as deep as his waiſt in *warm water*; raiſing his *head high* in bed; laying *hot bricks* at a convenient diſtance from the *knees*, *legs* and *feet*; *bliſtering* the *head*, *temples*, *behind* the *ears* and *other parts* if neceſſary; *ſtimulating* the *inteſtines* ſtrongly with *clyſters* of *coloquintida*, *&c.* boiled with water, to each of which *two* or *three ſcruples* of *emetick tartar*, or as many *ounces* of *eſſence* of *antimony* ſhould be added, and *injected every ſecond hour* or *oftener* if needful; applying *cataplaſms* of *muſtard* ſpread thick on ſoft leather to the *ſoles* and *palms*; rubbing the *lips* and *tongue* with the moſt *pungent volatiles*, and introducing *doſſils* moiſtened with the *ſame* into the *noſtrils*; in ſhort by uſing whatever *irritating means* can be deviſed to *rouſe* the *patient* from his *preſent inſenſibility*; elſe death muſt ſoon enſue. And whenever he has ſo far recovered his reaſon, as to be able to ſwallow, a common ſpoonful of a mixture, made with one and a half or two ounces of *manna*, half an ounce of *ſal catharticum*, one hundred and twenty drops of ſpirit of *hartſ-*

they communicate to thoſe parts, the more diſtant arteries and other muſcular membranes, relax alſo by ſympathy; and then ſtools may eaſily be promoted; whereby any overfulneſs that took place in the *viſcera* and *brain*, will be no leſs quickly than effectually removed, ſo the diſcharges be but plentiful, and proper care is otherwiſe taken. I would be underſtood, that ſuch applications ſhould be made early in the diſeaſe. Further, whenever the conſtrictions that act on the outward and extreme parts yield, the veſſels there dilating in conſequence, will receive and circulate a greater quantity of the fluids, by which means, the veſſels within will be ſo far relieved of the *plethora* they before ſuſtained.

horn, and as much *eſſence* of *antimony* (or one or two grains of *emetic tartar*) and ſix ounces of water, muſt be given every half hour, till a free ſtool is promoted; to which others will follow; ſo that the medicine may then be laid aſide. However, if the patient had been ſufficienly emptied by the clyſters, this laxative, perhaps, may be the leſs neceſſary. And whatever might be the means that were uſed to bring on *this diarrhœa*, it is a pleaſure to obſerve, how the pulſe *quickens, fills and ſoftens, and the throbbing of the carotids, diſtention in the veſſels of the eyes, and ſtrong palpitation about the epigaſtrium* all abate, as the other threatening ſymptoms alſo do, after every ſtool: and a plentiful ſweat ſucceeding, the fever will ceaſe for this time. But, as the danger may again be as great on the next return of the *paroxyſm*, *this* muſt either be prevented, or the violence of *it* abated; by giving a large doſe of *Peruvian bark* every hour or oftener, together with volatiles and laxatives, provided the head be ſtill much diſordered, or a tightneſs or diſtention is perceived in the abdomen. But, if it be not judged neceſſary to continue an eaſy *diarrhœa*, from four to ſix common ſpoonfuls of a *ſtrong decoction* of *Peruvian bark* with a drachm of the powder and *ſerpentaria* made with water, ſhould alſo be injected every ſecond hour by way of clyſter, though at the ſame time, the patient takes the ſame medicine the other way, having from thirty to ſixty grains of bark, in fine powder, added to each doſe of the decoction the patient ſwallows, provided he be an adult; but a leſs quantity of the powder muſt be given to younger ſubjects, according to their different ages.

So far as I have yet obſerved, theſe fevers are always *quotidians*; ſo that the longeſt intermiſſion we can expect, will be only of twelve hours, and

ſome-

ſometimes but of ſix or fewer; wherefore, it behoves us to do all we can in ſuch perilous caſes, to prevent them when a fair opportunity or even a remiſſion offers. And, in other reſpects, the regimen ought to be nouriſhing, cordial and ſtimulating, more eſpecially during the intermiſſions; for a remarkable proſtration of ſtrength preſently enſues, from the unnatural conſtrictions that ſo lately acted on ſome parts of the ſyſtem, and exceſſive diſtentions of the veſſels in others, together with the unnatural compreſſions that the nerves were, by theſe means, made to ſuſtain. To a violence of this ſort done to the *nervous ſyſtem* in general, or to ſome particular parts of it more than to others, it may, probably, be owing that, the intercourſe between the extremities of the *nerves* and *common ſenſory* being in ſome meaſure intercepted for the preſent, either an univerſal or local debility, enſues in acute diſeaſes; and this communication being reſtored, and the veſſels repleniſhed with juices, which, not only gives them a due degree of tenſion, but ſuch alſo as are adapted to repair the waſte that has been made in the conſtitution, the patient gradually recovers health and ſtrength.

It happens moſt frequently, indeed, that ſuch patients cannot ſwallow, till they are relieved of the above ſymptoms; but were it poſſible to make them do ſo, it would be imprudent to force much drink or nouriſhment on them, when the internal veſſels already ſuffered ſo high a degree of plethora, and no adequate ſecretions are made to relieve them. Though theſe are only intermitting fevers under various maſks, yet the pulſe will in all reſpects be the ſame in them, as it commonly is in the ſeveral diſeaſes they now mimick. It is therefore ſlow, ſtrong and hard, for the moſt part,

becomes ſofter and more frequent, as the *anomalous* ſymptoms give way. It happens, however, in theſe *ſymptomatick apoplexies*, *&c.* as in the true ones, that when the pulſe becomes very quick and ſmall, it is ever a bad ſign, and death cannot be far off, for reaſons which are too plain to require explication.

Weakly men, but more eſpecially women who abound with *acidity*, are liable to certain ſymptoms, which are not very common to periodical fevers, when that acrimony is wanting; ſuch as cramps or convulſive contractions, firſt in one part and again in another; acute pains darting through various places, in particular, from the hips to the ends of the toes and the ſoles, which come on ſuddenly, and after raging for a definite number of hours, a ſweat enſues, when they ceaſe almoſt at once; but then, a numbneſs remains in the parts. Others have an intolerable burning and ſmarting in the ſkin all over their bodies; but without any perceivable ſwelling or redneſs. Sweating alſo abates this heat, though ſuch a tenderneſs will ſtill continue, that the patient can ſcarcely endure to be touched; nor could he at all bear *this* during the paroxyſm.

As theſe complaints attack and recede at particular hours daily, they ought to have a place amongſt fevers of the intermitting ſort; and tho' the pulſe may not perhaps be ſenſibly accelerated, it will yet be rather harder than in health.

If one might preſume to gueſs at the remote cauſe of theſe ſymptoms, they might, perhaps, be imputed to the extremities of the *nerves* being ſome how irritated by the acid acrimony, which taints and thickens the fluids, ſo that they not only cannot paſs the fine veſſels freely, but the coats of theſe canals likewiſe are in ſome meaſure *ſpaſmodically conſtricted* by the vellication of the ſame pungent humour: and the *excreting ducts* of the *cuti-*

cular

cular glands alſo, being ſimilarly affected, the perſpiration from the outer ſurface, muſt thereby be retarded, and this ſharp matter detained in conſequence. But, whenever it is expelled by ſweating, the burning that before was perceived ceaſes, as hath been ſaid.

In ſome of the above complaints, *acidity* ſeemed to prevail to ſuch a degree, that though the patients had eight or ten *vomits*, and almoſt as many *ſtools* daily, for ſeveral ſucceſſive days, yet the diſcharges were ſtill of a *verdigris colour*; and ſo ſharp withal, that the throat and *anus* were fretted by them. But ſo much of *that acrimony* ſtill remained, that the like diſtreſſing ſymptoms, as well as the *evacuations*, returned with every ſucceeding paroxyſm. As magneſia, and eſpecially crabs-eyes, though they were given freely, had but little effect, when acidity ſo abounded, I had recourſe to ſmall doſes of *ipecacuanha* in every intermiſſion, beſides promoting the vomitings that happened of their own accord, with repeated draughts of warm water, during the moſt diſtreſſing ſtate of the diſorder. And after the *ipecacuanha* had done working, the decoction of *Peruvian bark* mixt with *crabs-eyes* was given; the diet in the mean time being of the alkaleſcent ſort; and the patient every now and then took a cupful of lime-water, to which a little brandy was ſometimes added.

It appearing improbable that the whole of this *acrimonious humour*, could have lain in the firſt paſſages (for then we might reaſonably have expected, they would have been freed of it in a few days, by the numerous diſcharges which were made both ways, together with the *alkalies* and the diet that were uſed) I ſuſpected, that on ſome occaſions the fluids may be ſo thoroughly tainted with *acidity*, as to affect the ſeveral *ſecretions* and *excretions* with

ſome

ſome conſiderable degree of pungency; (for I have known even the ſpittle to have a ſouriſh taſte) or that the ſame *acrimony* may ſometimes be plentifully collected in the *meſenterick* and *meſeraick veſſels* and thoſe of the *ſpleen*, in particular conſtitutions; *which* being put in motion by a horrour, fever, or ſome other cauſe, paſſes by the branches of the *vena portarum* to the liver, and thus promotes the acrid diſcharges which are ſo common to *hyſterical* and *hypochondriacal people*. The latter ſuppoſition, is indeed attended with difficulties; and the former may not be free from objections in the opinion of ſome people, though the probability ſeems on our ſide. For, though it may probably be granted, that an acetous or indeed any other pungent acid, cannot by itſelf be readily admitted, into the abſorbing veins of the *viſcera*; yet, when ſome portion of it, mixes with the chyle, and the ſeveral ſecretions, that are made in the ſtomach and inteſtines, it may thus paſs in ſmall quantities to the circulating fluids and be gradually accumulated in them, greatly to the detriment of the perſon, unleſs the conſtitution be timely diſcharged of it, in the way of ſecretion and excretion.

The fevers of this ſeaſon, only remit in ſome patients for the firſt two or three days; in others, from having intermiſſions, they change either to continued or remitting fevers, owing moſtly to ſome overſights, or miſconduct of the ſick or their attendants. Should *this alteration* happen from coſtiveneſs, the hard *fæces* acting as a *ſtimulus* on the inteſtines, may cauſe an inverſion of their *periſtatick* motions from the place thoſe lie in; whence a vomiting, generally of a greeniſh coloured bile enſues. And though the ſtomach were cleared of that ſharp humour by repeatedly drinking warm water and throwing it up again, yet the vomiting will ſtill continue;

tinue; nor can it be checked by any *antiemetick*, *correcting*, or *ſedative medicine*, till the pellets of hard excrements are diſcharged.

To my ſurprize, this has ſometimes happened, though the patients had ſeveral looſe ſtools daily; and the cauſe of it might ſtill have remained unknown to me, had I not occaſionally, diſcovered many *ſcybala* voided, which from their hardneſs and being enveloped with *mucus*, ſeemed to have lain long in the body, the thin excrements paſſing by them. Theſe *ſcybala*, generally ſpeaking, are within the reach of *clyſters*; which therefore ought to be injected again and again, till the end is anſwered; for, at preſent, the ſtomach will not retain any ſort of purging medicine; and even if it could, the pellets might not be removed by it. Therefore, when ſuch vomitings happen in fevers, and all other methods fail in checking them, *clyſters* made with weak broth, thin gruel or a decoction of camomile flowers, having a little Caſtile ſoap diſſolved in them, may be adminiſtered; even tho' the belly ſhould be moderately looſe; but if it be much bound, more active injections muſt be uſed. Had I formerly known the cauſe of this ſymptom, ſome lives might, probably, have been ſaved, which were loſt through my ignorance. Yet after all, I cannot aſſign any preciſe rules, whereby to judge when vomitings are excited and ſupported by hardened excrements irritating the inteſtines, except by enquiring, whether the patient had not been very coſtive for ſome time before the fever; if ſo, we are in the next place to inform ourſelves as to the number and conſiſtence of the ſtools he had ſince the diſeaſe invaded, whereby to determine, with ſome degree of probability, whether the inteſtines are cleared or not of the hard *fæces* that were collected in them; according to which our practice may be regulated.

Of

Of the JAUNDICE from a COLICK.

NEITHER *vomitings* nor *purgings* being ſo common in *colicks* at this time, as they were earlier in the ſeaſon, the *jaundice* may now be more frequent from theſe complaints. And from the like tendency to *coſtiveneſs* in particular conſtitutions, the *dry belly-ache* alſo, appears oftener towards the end of ſummer, when the weather becomes cooler and more changeable.

Thoſe who are liable either to the gout, rheumatiſm or aſthma, are in danger of theſe complaints; as children under ſeven years of age, likewiſe are of catarrhs, more eſpecially they who had pituitous coughs, or if any conſiderable degree of plethora, had previouſly taken place, in the veſſels of the trachea or lungs.

How colicks ſhould be treated, hath already been briefly mentioned; and the manner in which ſome of the other diſtempers that have juſt now been named ought to be managed, ſhall be taken notice of hereafter.

I never ſaw the *jaundice* enſue from a *colick*, and but rarely after one, in which the diſcharges often attending that complaint both ways, were promoted, till pure bile paſſed. It is true indeed, that the weakneſs of the patient may ſometimes make it neceſſary to check theſe evacuations, before the *acrimonious humours* are all removed; whence a *jaundice* may follow with equal certainty, as if the diſorder had been injudiciouſly treated from its firſt onſet, or the ſick had not vomited or purged at all. Theſe, however, are to be conſidered as caſes of neceſſity but not of choice, for a truce may be obtained for the preſent, elſe the patient muſt be loſt; and in the mean time, *abſorbents ſhould be given freely, and in a cordial vehicle.*

A *jaundice* appears at once in a *colick*, or immediately after one that was occaſioned by an *acid acrimony* conſtringing the *biliary ducts*, as happens frequently to infants, ſoon after their births; and not leſs ſeldom to adults. And ſo long as *theſe* ſharp humours are detained, both the conſtriction and *jaundice* will continue—Nay the *latter* will oftentimes remain, even after the *ſtomach* and *duodenum* have been ſufficiently cleanſed. For the *gall* which had for ſome time been obſtructed in the ducts, becomes ſo viſcid, that it cannot paſs them freely. When this diſorder happens to infants, *magneſia* or *crabs-eyes* and *rhubarb*, muſt be given daily with ſmall doſes of calomel occaſionally added, and the *breaſt milk* withheld, ſo far at leaſt, as not to make it the whole of their nouriſhment; which ought to conſiſt rather of thin gruel and broth. To adults in the like circumſtances, I have given gentle emeticks from day to day with ſucceſs. But ſuch a courſe of vomiting, is by no means to be proſecuted when the liver is *ſchirrous*, or the branches of the *hepatick* artery are obſtructed.

The *protuſive* motion of the inteſtines, depending greatly on the *ſaponaceous* and *ſtimulating virtue* of the *bile*, of which they are deprived in the *jaundice*, a coſtiveneſs thence enſues, whereby the *ſickneſs* and oppreſſive weight the patient perceives about the *epigaſtrick region*, are increaſed. The inteſtines therefore ſhould be emptied, before *emeticks* are given; and if *theſe* do not keep the belly ſufficiently looſe, a few ſpoonfuls of a warm alkalized laxative mixture ſhould be given at bed-time, till the *bile* has reſumed its natural courſe. And that it hath will be known, from the colour of the ſtools, the pure *bile* which is diſcharged by vomiting, and the patient finding himſelf light and eaſy at the ſtomach and about the neigbouring parts.

And

And the *gall*, being again ſeparated from the blood, in the courſe of *ſecretion*, the yellow colour of the eyes, ſkin and urine will diſappear in proportion.

Of the PITUITOUS ASTHMA.

THE *aſthma* of this ſeaſon is moſtly of the *pituitous* kind, owing to the fluids being preternaturally congeſted in the lungs, and the profuſe ſecretion that is thereby made into the *bronchia*. But this complaint may be abated in a few hours, by puking the patient with *oxymel* of *ſquills*;—or which is ſtill better, *antimonials* joined with *laxatives*, ſhould be made in a mixture with water, in ſuch proportions, that by the time the perſon hath taken five or ſix doſes of it, at the diſtance of half an hour between each, four or five vomits and ſome looſe ſtools, as well as a plentiful ſweat may be promoted. But then a warm bed-pan muſt be conveyed under the covering, when the patient hath occaſion to uſe it, leſt this *ſweat* be interrupted, by the admiſſion of cool air. The room in which he lies, ought to be airy, but without ſuffering the wind to blow too forcibly on him. Though the difficulty in breathing will probably be ſoon removed or abated by this management, a cough and ſpitting muſt enſue from *this* and every other diſeaſe, in which any conſiderable degree of *repletion*, had happened in the lungs, as hath been ſaid on other occaſions.

Of

Of DROPSIES.

WHEN the ſeveral orders of veſſels, are endowed with *that ſtrength* and *permeability*, which is neceſſary to them in their various ſituations, and according to their different functions, and the fluids neither exceed nor fall ſhort in quantity, and are of a quality ſuited to the individual, that perſon whoſe conſtitution is thus properly regulated, muſt enjoy health, ſo long as *this* harmony ſubſiſts. For the ſeveral ſecretions and excretions will be rightly performed; and ſuch humours as are ſeparated from the blood but which are intended to be again reaffuſed into the circulating fluids, will be duly abſorbed by the veſſels which are appointed for this purpoſe. Hence nothing ſuperfluous can remain, to form an irregular lodgement of *them* any where; ſo exactly will *ſecretion*, *abſorption*, and *excretion* counterbalance each other, in ſuch habits as are thus accurately equipoized.

But as the *vires vitæ* are ſtill languid, and the *perſpiration* is abated at this ſeaſon, much moiſture being likewiſe imbibed from the air *, the quantity of the *fluids* muſt both ways be increaſed, and *their* conſiſtence more broken down; the contractile ſpring of the ſolids, being alſo much impaired

* The *abſorption* is ſo great, that, though *dropſical people* may have ſeveral large looſe ſtools daily, beſides the urine that is diſcharged, and the *perſpiration* which is conſtantly proceeding from the lungs and other parts, yet they ſhall ſwell ſtill more from this cauſe, though little is drank in the mean time to increaſe it. *Dr. Kiel*, therefore, was not miſtaken, in aſſerting that thirty ounces of moiſture were abſorbed from the air in the ſpace of twenty-four hours; for on many occaſions it muſt conſiderably exceed, rather than fall ſhort of that quantity.

thereby.

thereby. The *exhaling arteries* may, therefore, permit their contents to eſcape faſter than the veins can take them up; for the abſorbing power of theſe veſſels is now but ſmall. Under ſuch circumſtances therefore, it is not difficult to conceive, how the *ſerous humours* may be effuſed, either in the *cellular membrane* or *cavities of the body*, ſo as to occaſion *anaſarcas*, *aſcites*, or *hydroceles*.

Theſe diſorders are preceded by *liſtleſneſs*, *bound belly*, and an abatement in the *urine*. The *eye-lids and face* commonly appear bloated in the morning, when an *anaſarca* is forming; but after the patient hath been ſome hours out of bed, *thoſe* ſwellings ſubſide, but the *feet* and *ankles* will then tumefy, and retain the mark of one's finger if it be preſſed on them; a ſure ſign that the elaſticity of the ſolids is greatly abated. When an *aſcites*, or a *hydrocele* is forming, a tightneſs and ſenſe of fulneſs will be perceived about the navel, or towards the *os pubis*; and theſe ſeveral parts being diſtended to their utmoſt ſtretch, ſo that they can receive no more, and the fluids continuing ſtill to be unnaturally effuſed, the ſwelling ſpreads and occupies other places. It is, indeed, true, that thoſe who had been weakened by a few fits of intermitting fevers, or by purgings, are moſt liable to *dropſies* at this ſeaſon; yet *they* ſometimes appear, though no preceding illneſs had contributed to them; more eſpecially in negroes who work in overflowed lands.

Though *dropſies* may be brought on by ſeveral other cauſes, yet *theſe* we ſpeak of, are plainly owing to too great a laxneſs of the *fibres* and attenuation of the *blood*. To cure them, therefore, we muſt not only diſcharge the extravaſated fluids in part, by promoting looſe ſtools and increaſing the quantity of the urine, (for ſuch patients can

ſcarcely

ſcarcely be made to ſweat, owing to the want of *impetus* in the circulation, and conſequent coldneſs of the outer ſurface) and therefore the urinary ſecretions will be more eaſily augmented in them than in other ſubjects, but likewiſe by increaſing the tonick force of the ſolids, in order to prevent a further effuſion; and thereby improve the conſiſtence of the fluids in general. And, by the ſame means, *theſe* humours that ſtill remain extravaſated, will gradually be abſorbed.

A few medicines will ſerve to theſe purpoſes; and theſe may be given in whatever form the patient chuſes. But ſhould he prefer a liquid (tho' it would be better if he could take *them* in powders or boluſes) eight or ten drachms of *Peruvian bark*, half that quantity of *ginger*, and twenty or thirty grains of *jalap*, muſt be boiled with a pint of water, till only eight ounces remain. The liquor being ſtrained, one drachm of ſalt of tartar, ſixty or eighty drops of tincture of *cantharides* *, and ſixty or more of *Boerhaave*'s tincture of copper muſt be added to it, to make a mixture, of which two common ſpoonfuls ſhould be given every ſecond hour daily, till it purges the patient. And when the *dropſical ſwellings* have either wholly or nearly diſappeared, the purgative ingredients may be left out, or it need not be ſo conſtantly given; though he muſt ſtill take the other medicines, till his ſtrength is fully regained. And this point will be the ſooner obtained, if he takes ten or fifteen grains of new *filings of iron* after every other doſe of the above compoſition. But then, a coſtiveneſs which may enſue from the *chalybeate*, muſt be guarded

* The tincture I uſe for *dropſies*, *catarrhal peripneumonies*, and other diſorders which require briſk ſtimulants, is made by infuſing one ounce of *cantharides* in powder and as much *camphor*, with a pint of *ſpiritus volatilis oleoſus*.

againſt. Theſe filings muſt be made in the form of pills or boluſes.

During this courſe, the diet ſhould conſiſt of tender lean meat either roaſted or boiled, eaten with *eſchalots*, *horſeradiſh* or *muſtard*; and biſket is better than leavened bread, becauſe of the greater proneneſs of the latter to acidity. If broth is deſired for a change, it ought to be well boiled and ſeaſoned with *mace*, *pepper* and *aromatick herbs*, and cleared of all fat. A pint of *claret* or red *port wine*, or a quarter of a pint either of *rum* or *brandy*, mixt with triple the quantity of water taken from a blackſmith's trough, may be allowed in the day, and taken by ſmall draughts at a time. But a ſtill greater indulgence in the uſe of ſpirituous drinks, muſt be granted to patients, who had been much accuſtomed to them. Cooling *ſallads*, *vegetable acids*, *ſummer fruits*, and *ſimply diluting drinks*, ſhould carefully be abſtained from in the above diſorders, however great the thirſt may be. But, to allay this latter ſymptom, a bit of ſaſſafras or any thing elſe that is gently ſtimulating, may be chewed, in order to promote a freer ſecretion of the *ſaliva*, *which*, yet ought not to be ſwallowed. Or ſhould ſo continued a *maſtication* prove tireſome, the mouth and throat may now and then be refreſhed by rinſing them with equal parts of vinegar and water.

Beſides the vehement inclination for drinking, that is common to people in theſe diſorders, we have yet another difficulty to encounter; which is, that they are ſo lazily and ſluggiſhly diſpoſed, as to have an utter averſion to motion or exerciſe of any ſort, unleſs they have great reſolution indeed to overcome *this propenſity* to indolence; for few things can have worſe conſequences than to yield to it. The patient, therefore, ſhould walk or ride

as

as much as his ſtrength will permit; but ſtill this muſt be done without fatiguing him to a great degree. When the weather is unfavourable, he muſt walk about within doors; or if his weakneſs prevents *this*, he may be ſufficiently exerciſed, by placing him on a ſpringy pine board about ſixteen feet long, each end of which muſt reſt on chairs; and it ſhould be of ſuch ſtrength as to bear the weight of two people without the danger of breaking. The patient being ſeated on the middle of this plank, an active perſon muſt get upon it with his legs extended to ſome diſtance from each other; and having found out that point, at which the board has the greateſt ſpring, he will eaſily put *it* in motion, by inclining his body a little, firſt to one ſide and again to the other alternately and quickly, at the ſame time preſſing hardeſt with that foot which is on the ſide he bends to. But if the jolting is more than the patient can bear, it may eaſily be moderated; or ſhould a ſtill briſker exerciſe be required, another perſon being placed at the oppoſite end of the board, the agitation may thereby be conducted to whatever degree any one pleaſes; even ſo as to equal *that* which would be given by a hard going horſe; and the patient may be made to ſweat plentifully, when this is thought neceſſary. In a *leucophlegmatia* and an *anaſarca*, general frictions, ſhould alſo be now and then made with a fleſh bruſh or roll of flannel, dipt in a mixture of brandy and ſpirit of *ſalt ammoniack*; and in theſe complaints, as well as an *aſcites*, the *abdomen* in particular, ought to be rubbed in all directions, at leaſt twice in the day, in order to promote the *ſecretions* in the *kidneys* and *inteſtines*, accelerate the circulation by increaſing the contractile force of the *ſanguiferous canals*, and the abſorbing power of the veins.

The ſingular caſe of a negro, who was exceedingly bloated with an *anaſarca*, deſerves to be mentioned; not only for that the diſeaſe was effectually removed in the ſpace of one night, but becauſe he was recovered, though ſcarecely any ſigns of life appeared in him. Six grains of *cantharides*, and half a drachm of *camphor* were made in ſix equal boluſes with a little conſerve; of which one was directed to be given every ſecond hour. Four of theſe boluſes were accordingly taken before bed-time; and by next morning, the floor in which he lay, was in a manner floated with his urine. The patient, who the day before was of an enormous bulk, was reduced to a mere ſkeleton, by this ſudden and exceſſive diſcharge. The pulſe could not be perceived; his limbs and body were all over cold, and it was doubtful whether he breathed at all; ſo that he ſeemed affected with a real *aſphyxia*. He was, however, reſtored from this ſeeming ſtate of death, by ſwathing his body and limbs moderately tight with bandages, that were wrung out of a mixture of brandy and volatile ſpirits, in which as much common ſalt was diſſolved, as the menſtruum could ſupport. General *frictions* alſo were made over theſe rollers; but moſtly downwards along the courſes of the larger *arteries* in the arms, th ghs and legs; and moreover he was ſurrounded with hot bricks. Pledgits dipt in volatile ſpirits were thruſt into the noſtrils, and the lips and tongue were likewiſe rubbed with them. Small quantities of a very *ſtimulating cordial mixture*, as well as of *ſpicy* and *ſpirituous nouriſhment*, were frequently poured hot into his mouth; deglutition being at the ſame time aſſiſted with one's fingers applied on each ſide of the *æſophagus*, in order to ſtroak that part downwards, with a moderately compreſſive force. The cure

was

was afterward completed with *Peruvian bark*, *aromaticks* and *chalybeats*, together with a proper diet, exercise and the cold bath.

Of some particular Disorders in the Liver and Spleen.

FROM the long continued heat of the summer weather, our solids are in the end weakened to such a degree, and the motion of the fluids becomes so languid, that *congestions* or *stagnations* of the humours, may easily be formed in the *viscera*, where the circulation is naturally slow; and these disorders will happen with greater certainty to those, who had been still more debilitated by diseases; in particular, fevers of the intermitting sort. The *spleen* is so frequently affected in this way, that perhaps two in five of the people, more especially in the country, are more or less diseased with swellings in *that part*, many of whom have been so distempered from their infancy; whence various complaints ensue. But the inhabitants of *Charlestown*, having assistance at hand, generally escape better.

I have known an *obstruction* of the *liver* or *spleen* brought on, by the too early use of *stypticks* and *restringents*, which were given to restrain the vomitings and purgings that are common to *autumnal fevers*, and administering *Peruvian bark* immediately after the paroxysm, and before the *plethora* that took place in the internal vessels was removed. Hence, either a *schirrhus* or an *inflammation* succeeded; which ending in a dropsy or suppuration, either way destroyed the patient. Doubtless there

is a great difference between a too diſtended and overcharged ſtate of the veſſels, and a rivetted obſtruction; though the latter and an inflammation alſo, may quickly follow, if the former be not removed in time.

In ſuch habitual ſwellings of the ſpleen, as ariſe from a ſluggiſh motion in the humours and weakneſs of the veſſels in that *viſcus*, provided they be not very painful, *frictions* made on the parts, and riding on horſeback are abſolutely neceſſary. But in the mean time, the belly ought to be kept moderately looſe daily, with *alkalized* purges; the vehicle for which ſhould be a decoction of *Peruvian bark* and *aromaticks* boiled with water. Though *aloes* and warm *ſaponaceous gums*, really poſſeſs no virtues in theſe diſorders, further than to promote a *diarrhœa*, whatever high opinions ſome practitioners may entertain of them, yet if they be adminiſtered, either *alkaline ſalts*, *magneſia* or *crabs-eyes* ought to be interpoſed, and an *alkaleſcent diet* obſerved; for ſuch patients, are very liable to acidity.

When the ſpleen is hard and painful, both the frictions and riding muſt be deferred; and warm purges are repeatedly to be given, in order to free the veſſels from this local plenitude. And when the ſwelling and pain have been abated by theſe means, frictions ſhould be made, but with a light hand at firſt; *Peruvian bark*, together with *aromaticks* and *alkalies*, muſt be given for ſome weeks. Exerciſe ſhould alſo be uſed daily, with the further view of ſtrengthening the conſtitution, as well as to diſlodge any *viſcid humour* that may ſtill remain in the parts affected, by the *concuſſions* they will receive from riding on horſeback; which of all exerciſes is the beſt on ſuch occaſions. It may be neceſſary, however, to add one or two drachms of *ſal catharticum*

tharticum to the other medicines in caſe of coſtiveneſs; and towards the end of the courſe *chalybeats* ſhould alſo be joined to them.

Of Tetanick Complaints.

THOUGH the *tetanus* and *opiſthotonos* attack thoſe who either lie abroad in the damp air at night during the ſummer, or are expoſed to the rain, and have not a ready opportunity to put on dry clothes, yet theſe complaints are generally moſt frequent towards the end of ſummer, when the weather is changeable. But as *they* appear at all times of the year, ſo are *they* commonly owing to the above courſes, except when they enſue from amputations, wounds or ulcers.

Nothing is a more frequent cauſe of *tetanick* complaints, than to have nails or ſplinters of any ſort, run into the feet, ſo as to wound the *involuera* of the tendons, or the *nerves* that are numerouſly inſerted in theſe parts. I have known the *opiſthotonos* to ariſe from the *extenſor* tendon of the thumb, being ſo ſlightly wounded, by the thorn of an orange-tree, that one could ſcarcely perceive where it entered. In theſe caſes, one of the principal means towards preventing the ſpaſms ſeems to depend, on intercepting all communication between the common ſenſory, and the parts that are injured, by cutting acroſs the tendon, or making an *inciſion* quite down to the bone. But, even if this has been done, after the diſeaſe was fixed, every other ſedative method muſt be employed for relieving the patient of the *tetanus*; which, when it ariſes from theſe external cauſes, is more difficult of

cure, than if ſuch accidents had not contributed to that complaint.

In fevers and moſt other acute diſeaſes, the pulſe is more or leſs hurried, and the *faculties* and *functions* of the *mind* and *body* are diſordered in proportion. Theſe ſymptoms may be occaſioned, by ſome ſort of *irritation* acting on *thoſe nerves*, that are inſerted in the coats of the *ſanguiferous* veſſels; whoſe *muſcular fibres being thereby ſpaſmodically affected*, an irregular diſtribution of the groſſer fluids muſt enſue, as is ſeen in *feveriſh* complaints. But in ſuch *tetanick* diſeaſes, as are not brought on by *fevers*, the *nerves* which contribute to voluntary motion, ſeem *primarily* affected. For thoſe muſcles (chiefly from the temporal downwards along the trunk of the body) whoſe actions are more immediately under the direction of the will, are detained in a ſtate of inflexible rigidity; * though neither

* Perhaps theſe *frightful contractions* may not always be owing to a ſtimulus applied to the extremities of *theſe nerves*, that ariſe from the brain, but moſt frequently to thoſe which proceed from the *medulla oblongata* and *ſpinalis*, which are diſtributed to the muſcular parts of the trunk of the body. For the common *ſenſory* and *functions* of the *cerebellum* being in general but little diſordered till the diſeaſe is far advanced, and near its *mortal period*, we have reaſon to believe that the *nerves* are not much injured in thoſe parts in its early ſtate. It may indeed be, that the *exciting cauſe*, is for the moſt part, originally applied to the *nerves* of the *medulla ſpinalis* in this diſeaſe; for I have ſeen patients, walking about ſome days before they were confined; complaining only of a *painful ſtiffneſs* in the back part of the neck, with ſome degree of *general laſſitude*. But, whether the firſt *morbifick impreſſions* be made on more or fewer *nerves*, the effect ſeems to be, that thereby the *animal ſpirits* are violently determined to, and accumulated in certain muſcles, ſo as to detain them in an *unremitted* and *violently* contracted condition for ſeveral weeks together; as I have known them to be in the *opiſtothonos*. How theſe things ſhould be, is above our comprehenſion. But however ignorant we may be of the nature and uſe of the *nervous fluid*; ſome conjectures

neither the *vital* nor *rational functions* may be much disordered, except after the more general *convulsive attacks*, that are common to these diseases; when indeed both the *breathing* and pulse will be much hurried for a short time. But in the intervals between those aggravated spasms, respiration is easy, and the pulse slow, tense and full; the latter being probably owing to the difficulty the blood meets in passing so many muscles as remain in an invaried state of violent contraction, wherefore it must be more collected in the vessels in other parts.

That only a few nerves may be thus affected, is seen in *cramps*, when only one or two muscles are convulsed; and so long as they continue so, it is no more in our power to move them, than we can those that are disordered in the same way in the *tetanus*. But, tho' no great number of nerves may, perhaps, be thus vellicated at the beginning of *that* disease, as *these* only which are distributed about the neck and jaws, the effect will be communicated to others, by means of that *sympathy* which subsists between the several parts of our system. *

Here

jections relating to that subject, have been admitted as probable. When, therefore, I take the liberty to speak of the *nerves* and their functions in the *animal œconomy*, whatever may be said is to be understood only as having some appearances of truth to support it, rather than that those things are demonstrable; for they may ever remain a secret to the *most acutely metaphysical genius*. But, though there be a *real satisfaction* and *no less utility*, in being able to investigate the causes of diseases, yet as *Celsus* long ago observed, *it is more useful to discover a method whereby to cure them, than to puzzle ourselves, by endeavouring to trace their immediate causes*; to which, let me add, more especially when *those* are involved in obscurity, and perhaps absolutely inscrutable.

* Now we have mentioned *cramps*, it may be proper to speak a few words concerning them. These are only irregularly local contractions, either of the extensor or flexor muscles,

Here we are again at a ſtand; for though it be well known, that *tetanick* complaints may be brought on either by cold, more eſpecially if the air be moiſt at the ſame time, wounds or ulcers of the joints or tendons, yet we cannot ſay how this comes to paſs, as it ſometimes does, even when the pain was not great, and therefore, the leſs likely to excite the *nervous ſyſtem*, to ſuch a violent exertion of its power on the muſcular parts. Should we credit experiments made on dead animals, the *nerves* are ſuppoſed to be elaſtick, and therefore not ſuſceptible of *ſpaſmodick conſtrictions*. But certainly they have properties in a living body, which can by no means be diſcovered on thoſe of a carcaſs. In thoſe *atonias* of the nerves, which are brought on by the dry belly-ache, we commonly ſay, and I think with truth, that theſe organs are too lax and weak for the exertion of muſcular motion, though the paralytick parts acquire ſo high a degree of ſenſibility, that the patient cannot endure to be touched. Hence it ſhould ſeem, that the communication of the *nerves* with the *ſenſory* is not interrupted; (for the perſon ſtill retains all his faculties) and that a greater excitement of the *vis nervea* is required for ſupporting the actions of thoſe muſcles, that are more immediately under the direction of our will, than for communicating ſenſation. Is it owing to

cles, but moſtly of the latter, and chiefly thoſe of the lower extremities. The readieſt way to remove them, is by putting their antagoniſt muſcles on action; as by walking or moving the limb; whereby a more equal diſtribution of the *vis nervea* will be produced. *Eel-ſkins* tied round the limbs, ligatures made on them, or holding *crude ſulphur* in one's hand, by no means prevent cramps, as ſome have ſurmiſed. But, as weakly people are moſt liable to them, in particular during the winter, when the legs and feet are chilled, the beſt way I know to obviate them is, to adviſe ſuch patients to wear woolen ſtockings in bed, and to keep theſe parts well covered at night.

the

the *nerves* having become more irritable, that the lighteſt touch or preſſure made on the parts, ſhall now give exquiſite pain? Be this how it may, certain it is, that ſuch patients moſt generally regain the uſe of their limbs; and then may we not with equal juſtneſs pronounce, that the *nerves* have then recovered from the debility they before ſuffered. It therefore ſeems, that on ſome occaſions, they may be relaxed and diſabled from performing their functions, even though their intercourſe with the common *ſenſory* is free and open, and that they recover their power and influence, on being again braced. In this inſtance, perhaps, the elegant doctrine of incitement will not wholly apply; for though a ſmall preſſure will give pain, yet an electrical ſhock, or even the greateſt impreſſion that the body can bear, without deſtroying life, will not excite any other than a momentary convulſive motion in the parts that are paralytick.

Bellini, on touching the inveſting membrane of the ſpinal marrow of a dog with a *cauſtical* ſpirit, immediately brought convulſions, on all the parts below the place to which it was applied. Doctor *Stewart* alſo did the like, with a probe preſſing on the ſpinal marrow in the neck of a frog; the effect continuing whilſt any preſſure was made; but the convulſions ceaſed inſtantly on its being removed. And thus, ſo long as *that* nerve had any ſenſe, he could at pleaſure detain all the muſcles below the part, in a ſtate of violent contraction, or allow the limbs to hang at their full length, in the moſt flaccid and relaxed manner. If this continued and general convulſion in the latter experiment, was owing to the animal ſpirits being forcibly puſhed forwards, *Bellini* produced the ſame effect, by applying a ſtrongly acrid ſpirit to the common covering of that nerve; which being

ſtrongly

ſtrongly conſtricted thereby, and its diameter leſſened in conſequence, the *animal ſpirits* were alſo urged onwards here in the ſame manner, and thus *they* were made to accumulate in the muſcles, detaining them in a ſtate of the moſt powerful convulſive contraction.

Be theſe things as they may, we muſt uſe our beſt endeavours, to abate the exceſſive ſenſibility, and thereby leſſen the irritability of the nerves in *tetanick* diſeaſes, in hopes that the ſtimulus which excites ſo unnatural an influx of the animal ſpirits to be made into the muſcular parts, may be ſo changed or weakened by time, that it ſhall no longer be able to produce the like effects. This is all we can do in ſuch *tetanuſes* as ariſe from untraceable cauſes, ſo far as I have yet diſcovered, after having diligently attended very many patients; for none of them were recovered by any other means than opium and bathing in warm water. The former is univerſally neceſſary; and it muſt be given with a bold hand, and at ſhort intervals of time between the doſes, till the end is anſwered. But if the patient cannot ſwallow, it it muſt be injected by way of clyſters; but in much larger quantities, than if it were given the other way. The bathing likewiſe ſeldom fails, in giving at leaſt a temporary relief, when the organs of deglutition are ſpaſmodically affected, or the patients cannot open their jaws at all, ſo as to admit any thing, till theſe parts are relaxed by the bath; ſo that drink and nouriſhment muſt be given them whilſt they are in the water. In ſuch deſperate caſes, therefore, warm water ſhould always be ready for the patient to be put into it, at whatever time this may be neceſſary, either by day or night; in order, not only to render ſwallowing eaſier, but alſo to abate the violence and frequency of the general

general ſpaſms, which on ſuch occaſions, ſometimes return oftener than once in the ſpace of five minutes. But as the heat of the water ought to vary according to the ſeaſon, ſo when the weather is cold, it ſhould be warmed to the 102d or 103d degree, and the patient muſt be wrapped in a blanket when he is taken out of it. On the contrary, during the hot weather in ſummer, it need not be heated above what will raiſe the mercury to the 99th or 100th diviſion of the thermometer; theſe degrees of heat ſeeming ſufficient to abate the excruciating contractions we ſpeak of.

Yet it muſt not be denied, that ſome patients have been the worſe for bathing, owing, in my opinion, moſtly, to their dread of drowning, notwithſtanding all the aſſurances which were given, that nothing of this ſort could poſſibly happen; and likewiſe, that they might reaſonably expect relief from it. When patients of this timorous diſpoſition come in my way, I never recommend bathing a ſecond time, unleſs they can be reaſoned out of ſuch groundleſs fears, and allow themſelves to be put into the bath willingly. Againſt ſo undiſtinguiſhed an uſe of warm bathing in *tetanick* diſorders, I have been warned, by the ſudden death of one of my patients, who I inſiſted ſhould be put into the water, in ſpite of the great averſion he expreſſed to the contrary; for no arguments that were uſed for diſpelling his apprehenſions of danger availed. The conſequence was, that exerting his utmoſt efforts to reſiſt thoſe who took him up, a general convulſion was excited, and deprived him of life in an inſtant of time, even before he touched the water. As this happened ſo ſuddenly, and no ſymptoms of immediate death had preceded, we had hopes that he might yet recover; and with theſe expectations he was

put

put into the water; general frictions were likewiſe made, and other ſtimuli applied ſome time, but to no purpoſe.

This unlucky event hath cautioned me againſt the uſe of this excellent remedy, without firſt obtaining the patient's conſent. In lieu thereof, I order ſuch timid people, to be laid on a *couch*, placed over the water, in ſuch a manner, that the ſteam of it may ſurround him; but here the water muſt be made much warmer, than if the patient were to be immerſed in it. The *couch* muſt be furniſhed with a canvaſs bottom, and be low, and ſo narrow that it may ſtand within the bathing-tub. On this, the perſon may lie for the ſpace of an hour or more at a time, having a thin pillow under his head, and his body covered with a blanket rather than a ſheet, which might chill him when damped, on his being moved from the warm ſituation in which he had for ſome time been placed; and for the ſame reaſon, no ſhirt ſhould be worn, either on this occaſion or in bathing the other way.

We have juſt now given one fatal inſtance, of the extreme *irritability* of the *nervous ſyſtem* at ſuch times; and, indeed, ſo delicately ſenſible is it in *tetanick* diſorders, that the moſt trifling outward cauſes, make violent impreſſions on it. As ſudden noiſes, whether they be expected or not; the appearance of an acquaintance; touching the pulſe; opening a window to admit the light, *&c.* An attempt to ſpeak has the ſame effect. I am perſuaded, that the dread he entertains of danger from the diſeaſe tends alſo greatly to exaſperate it; and *this* likewiſe is not a little contributed to, by the irtitation which is cauſed by the acute pains he conſtantly endures, from the convulſed condition of ſo many *muſcles*. But great as *this* muſt be, he yet bears it ſilently, and without daring to utter a ſingle

ſingle moan; being ſenſible, that even ſo ſmall an exertion as *this* muſt be attended with, would haſten the more generally convulſive attacks.

Whatever truth may be in the above reaſoning, the greater frequency of *tetanick* complaints at this time of the year, may perhaps *be* owing to the more lax and irritable condition of the ſolids, and ſuch an exceſs of *mobility* in the *nerves* and *common ſenſory*, as renders them ſuſceptible of violent impreſſions from ſmall cauſes, ſome certain circumſtances in the conſtitutions of individual perſons, diſpoſing them to the above diſeaſes; whilſt I have known others, who were equally expoſed to the ſame remote cauſes, either eſcape unhurt, or at worſt, to have an intermitting fever. More need not be ſaid of the *tetanus* and *opiſthotonos* in this place; theſe complaints having been particularly treated of in the firſt volume of medical eſſays, publiſhed at London in the year 1757, by a ſociety of gentlemen who had the improvement of our profeſſion much at heart.

Of the TENESMUS and DYSENTERY.

EXCEPTING intermitting fevers, no diſorders are likely to be more common at this ſeaſon, than a *teneſmus*, or a *dyſentery* in conſequence thereof; and contrary to what we are uſually told, theſe complaints for the moſt part ariſe, in this climate, from coſtiveneſs; owing either to a redundance of *acidity*, or a defect or inertneſs of the bile, or an *atonia* in the muſcular coats of the inteſtines. When theſe diſeaſes are forming, the perſon ſeldom goes to ſtool; or *then* voids but little, in proportion to the nouriſhment he takes; for the appetite may

may as yet be pretty keen. The excrements being thus accumulated by degrees, *they* at laſt become too bulky to paſs from the *colon* to the *rectum*; this happens more eſpecially in that part, where the former makes an angle, before its aſcent, to empty itſelf into the latter.

After ſome days, the patient begins to have frequent calls to eaſe nature; but then more or leſs of *mucus* only is diſcharged. And this ſlimy matter being ſecreted more plentifully now, than it was in health, and falling from above on the rectum, *it*, together with the irritation that is cauſed by the indurated *fæces*, excites a more frequent inclination for going to ſtool. The veſſels in the lower part of the inteſtines, being overcharged, becauſe the free aſcent of the fluids is intercepted by the preſſure that is made from above on them, more or leſs of blood may be wrung from them, by the repeated and violent ſtrainings that are exerted, with which the *mucus* will be tinged; and ſooner or later, much blood may be diſcharged in the courſe of the diſtemper; for if it be not ſpeedily removed, a *hæmorrhage*, *fever*, *inflammation*, and *mortification* may ſucceed.

It is plain, that under circumſtances like theſe, little advantage can be expected from *emeticks* or ſo mild a purgative as *rhubarb*; and that calcined *hartſhorn*, *ſtypticks*, and even *opium* muſt do harm, if the uſe of the latter be cloſely purſued; though in the courſe of the cure, it will be neceſſary to give *laudanum* at night, in order to procure ſome reſpite from the frequent calls to ſtool, which greatly fatigue and are quite unprofitable to the patient. The removal of this complaint, undoubtedly depends, on freeing the inteſtines of groſs excrements; for away they muſt come, before the ſick can poſſibly be relieved. I have indeed accom-

accompliſhed *this*, by giving laxatives repeatedly, in order to diſcharge ſome ſort of *acrimony*, the nature of which I had no certain idea of, though *it* was ſuppoſed to promote ſo many ill-conditioned ſtools, by its *ſtimulus*. But the truth ſeems, that theſe purges anſwered no other good purpoſe, than to increaſe the ſecretions within; by which means, together with clyſters that were injected with quite another view, the *excrements* were at laſt broken down and made paſſable; and the detached pellets, which lay diſperſedly in the *colon*, coming away afterwards, it was thought ſtrange how *theſe* could be formed, during ſo conſtant a purging; for ſo the *teneſmus* was called.

The patient will probably inform his phyſician, that at ſuch a time a purging came on; whereas had he viewed what then came away, only ſlime would have been perceived; the blubbering noiſe that uſually attends theſe efforts, deceiving him. But when a perſon in a *dyſentery* acquaints me, that, after a coſtiveneſs of ſome days, a purging enſued, which from the firſt obliged him to ſit long and ſtrain much, I doubt his report; for *this* ſeldom happens at the beginning of a *diarrhœa*, except from the piles, or humours of a very acrid quality; of either of which, a true judgement may be formed, from the ſigns that are common to each of theſe diſorders. If he adds withal, that he perceives a weighty fullneſs above the *os pubis* and round his body, together with a pain in the loins, and griping at times in the lower part of the belly or towards the groins (the left in particular) which immediately obliges him to go to the cloſe-ſtool; and that with all his endeavours, he *then* can diſcharge only more or leſs of a clear or bloody *mucus*, the caſe is plainly as was ſaid. Nor is any other opinion to be entertained of the firſt cauſe of it, than

what we have deſcribed, though perhaps our aſſiſtance hath not been required, till the patient has a fever, and much blood is voided.

On entering the patient's chamber in the latter caſe, an experienced phyſician, without aſking him one ſingle queſtion, may diſcover by his *ſmell*, whether or not the inteſtines are mortified. For as much coagulated or liquid blood is then voided, ſuch a raw and mephitical ſcent will ſtrike his organs, as is to be perceived in ſhambles, where a number of bloody carcaſſes are ſet up to ſale, in the firſt ſtate of putrefaction. This ſort of odour, is not ſo well to be deſcribed by words, as it may be diſcovered by one's ſenſes. However, I am ſo well acquainted with it, that, on entering the patient's apartment ſuch times, I have at once informed the by-ſtanders, that the caſe was abſolutely incurable. And hard as this ſentence might have ſeemed, it was too well founded. For I never yet have recovered one who was in this ſtate, notwithſtanding the moſt noted *antiſepticks* were applied in various ways.

In the early ſtate of this diſeaſe I commonly order clyſters made with warm water alone or camomile tea, having a little Caſtile ſoap diſſolved in each of them, to be injected at the diſtance of two hours from each other, and retained as long as poſſible. And when the excrements are ſuppoſed to be ſoftened or ſo broke down, as to be made fit for paſſing eaſily, a mixture made with manna, magneſia, ſome drops of oil of mint and water muſt be given in ſmall doſes every half hour, till the patient has a free ſtool. And in order to quicken its operation, one or two drachms of *ſal cathartic-um* may be added to the medicine. But, as it may require ſeveral days, to clear the inteſtines, clyſters and purges muſt be given daily, and an opiate

opiate at night to procure reſt, and prevent the frequent calls to ſtool, which without this, will certainly return after the purges have done working, ſo long as any *ſcybala* remain within. We ought therefore to be aſſured, that the bowels are effectually freed, before the patient is diſmiſſed, elſe every thing muſt in a few days be done over again; for one ſingle pellet will form a ſtop, and prevent the paſſage of the excrements from above, whereby the complaint will be renewed. We may judge with tolerable certainty, that the inteſtines are cleared, from the calmneſs of the pulſe, the ſtools being regular, and of a proper conſiſtence and colour; the air paſſing freely downwards, which it could not do before; and in ſhort from the troubleſome ſymptoms being all abated.

It ſometimes happens, that the above ſimply diluting clyſters do not anſwer the purpoſe, ſo ſoon as might be wiſhed; in which caſe, and ſuppoſing the bowels are not yet inflamed, more active injections muſt be adminiſtered and repeated if neceſſary.

When this complaint ſucceeded a coſtiveneſs of long continuance, a pain ſometimes remains, after the loweſt part of the *colon* is emptied of excrements; but *this* lies ſo high, that a clyſter, though it conſiſted of a pint of liquor will not reach it. And as it ſeems owing to ſcybala lodged in the upper folds of that inteſtine, we muſt depend on purges and opiates given alternately, till the obſtructing cauſe is removed.

It alſo ſometimes happens from a *teneſmus*, that the ſame frequent inclination for going to ſtool ſhall continue, even after all the groſs excrements have been expelled; owing either to the irritability of the *rectum*, or that part being ſlightly inflamed. To allay this troubleſome ſymptom in the former

caſe, three or four drachms of *poppy-heads*, and one or two of flax-ſeed muſt be boiled with milk and water to eight ounces. The liquor being ſtrained, one drachm of the beſt olive oil, mixt either with a ſuitable quantity of mucilage of *gum arabick* or the yolk of an egg, muſt be added to make a mixture, of which three or four common ſpoonfuls ſhould be injected warm by way of clyſter, every ſecond or third hour, or whenever the former comes away. Theſe injections likewiſe ought to be retained as long as may be; for which reaſon the patient muſt reſiſt *that* deſire for going to ſtool, which introducing the pipe will give; tho' this will ſoon ceaſe, if he can but withſtand the firſt inclination.

It is needleſs to ſay much of a dyſentery, which ariſes from conſtipation, becauſe the cure of it depends on clearing the inteſtines of all the *ſcybalous* excrements, with clyſters and purges; opiates being alſo interpoſed at night. But ſhould the *colon* or *rectum* be inflamed in the complaint we ſpeak of, a tormenting *ſtrangury* frequently attends; and the teſticles likewiſe, are ſometimes either ſpaſmodically twirled, firſt one way and again the other, or they are ſo ſtrongly drawn upwards againſt the *os pubis*, as gives exquiſite pain. The like ſymptoms or a *priapiſm*, happen alſo in the *ſtone*, *nervous colick*, as well as when the *belly* is much bound and puffed withal, and convulſive ſpaſms act at the ſame time on the lower inteſtines. And as a pain in the loins and vomiting of green bile, are common on the latter occaſion, the diſorder may be miſtaken for gravel in the kidneys or ureters. This, however, will be of little ill conſequence, ſo the error is not ſo long perſiſted in, as wholly to overlook the true cauſe; the intention in both caſes, not being very contradictory at firſt; for in either diſorder

diſorder theſe ſymptoms will yield to opiates, ſoft lenient clyſters, and putting the patient in warm water as low as his waiſt. And after they have abated, the inteſtines muſt be cautiouſly and gradually emptied of hard excrements.

Of the NERVOUS COLICK.

THE *nervous colick*, or as it is called the *dry belly-ache*, often comes on after the *bark* has been given without *alcalies*, when acidity abounded and the belly was at the ſame time bound; or when the bowels have been weakened by vomitings, purgings or both; more eſpecially, if theſe diſcharges have been ſuddenly checked by harſhly ſtyptick medicines. It likewiſe ſeizes *hypochondriacal*, *hyſterical*, and others of very irritable conſtitutions, who have taken the *bark* with *elixir* of *vitriol*, or ſuch auſtere medicines as brace forcibly; in particular if an acid acrimony prevailed. It alſo ſucceeds a *cholera* or a fever, in which much bile has been diſcharged towards the autumn, when the weather begins to be changeable; and ſtill with more certainty, if a cooling aceſcent kind of diet has been uſed; or that the patient has made too free with the fruits of the ſeaſon. And laſtly the ſame diſeaſe may enſue from a partial ſecretion of the *bile*; from its paſſage to the *duodenum* being obſtructed by a conſtriction of the *biliary ducts*; or from its ſaponaceous virtue being weakened, by a *prevailing acid* or any ſimilar cauſe.

Were we applied to early, this diſeaſe might be prevented, by emptying the patient thoroughly with warm alkalized laxatives, purgatives, and

clyſters of the ſame kind; guarding him in the mean time from cold or damp air, and enjoining an *alkaleſcent* diet of ſpoon-meats. The belly ſhould be kept looſe for a conſiderable time. And as the *periſtaltick* motion of the inteſtines, muſt have been remiſs before the complaint happened, it will undoubtedly be rendered ſtill more languid from the diſorder. To prevent this conſequence, I direct a decoction of *Peruvian bark* to be given, together with a ſmall quantity of Epſom ſalts or other curatives as the caſe may require. In the mean time, the diet ſhould conſiſt moſtly of lean meat and broth warmed with ſpices, onions, *&c.* And when the weather is fair, the patient ought to ride on horſeback daily; but without fatiguing himſelf.

Our advice however is ſeldom required, before the ſecond ſtage of *this complaint*; when frequent vomitings, moſtly of greeniſh coloured bile attend; and in two inſtances I obſerved, that the clyſters, which had almoſt immediately before been injected, were diſcharged *this* way; the taſte of which was complained of by the patients; the oil likewiſe, that was added to them, appearing on the ſurface of the matter that was thrown up; nor were theſe excretions free from a *ſtercoraceous* ſmell; yet the patients happily recovered. The little time in which theſe ingredients paſſed from the *rectum*, ſhowed how violent an *antiperiſtaltick* motion acted on the inteſtines, throughout their whole tract.

In this ſtate of the diſeaſe, a violent pain in the bowels returns at ſhort intervals of time; which generally draws the navel inwards. The *nervous ſyſtem*, including the common *ſenſory* is then ſo irritable, that convulſions oftentimes enſue; or the patient will be exceedingly watchful, and complain of ſo acute a ſenſation in all the muſcular parts, that, though it is not in his power to lie long in

one

one poſture, yet he cannot endure to be touched. If theſe ſymptoms be not removed in a few days, the pain within abates by degrees, and at laſt ceaſes; by which time, a weakneſs that was perceived in the limbs, on the firſt remiſſion of the pain in the bowels, will have terminated in a *palſy*; ſo that the patient can no longer help himſelf. However, an intolerable ſoreneſs will ſtill remain; and ſometimes ſuch a burning is perceived in the ſoles, with ſeemingly a ſtrong *traction* from theſe parts upwards, as prevents him from having any reſt. The pulſe alſo from having been ſtrong and hard, now becomes weak, ſmall and ſoft; but it is ſtill ſlow as before.

On being called at this ſecond period of the diſeaſe, I formerly uſed to promote the vomitings, with repeated draughts of warm water, till it returned clear and taſteleſs, in order to free the ſtomach and duodenum, of acrimonious humours. But, though the retchings were not ſo troubleſome for ſome ſmall time after this operation, they would nevertheleſs return as before, if the exceſſive *irritability* of the *nerves* were not abated, and a truce from the tormenting ſymptoms procured with opiates; *when* an opportunity will be given for adminiſtering laxatives, with ſome certainty of their having the deſired effects; for then, the patient may be purged as eaſily, as in any other diſorder. The purging mixture mentioned above, will ſerve to this purpoſe. But ſhould we ſtill be diſappointed, and more eſpecially if convulſions ſupervene, a large bliſtering plaſter ſhould be applied over the navel, from which I have ſeen excellent effects; becauſe its *ſtimulus*, perhaps, gave an immediate ſpring to the veſſels within; or *it* acted otherwiſe as an *antiſpaſmodick*; for ſo far as I have yet ſeen, the ſame good ends do not enſue, from bliſter-

ing thoſe parts that are more remote from the ſeat of the complaint; and it is very probable, that, had *this* application been made earlier, it would have given relief. Be it ſo or not, a purging oftentimes enſues of its own accord; or it will be more eaſily promoted after the bliſtering the *abdomen*. And by whatever means *that* hath been promoted, many hard pellets will be diſcharged, before the patient recovers.

If the convulſions ſtill return, ſeven or eight grains of *volatile ſalt* of *hartſhorn*, four or five of *camphor*, and one grain of *opium*, mixt with any ſort of conſerve, ſhould be given every hour, till theſe dangerous ſymptoms ceaſe; and then recourſe muſt be had to purgatives, to which *volatiles* and *camphor* muſt be added. Whatever clyſters are injected whilſt convulſions ſtill threaten, ought to be of the relaxing and ſedative ſort; as as milk, *broth*, or even plain water, with thirty or more drops of *laudanum*, and a few ſpoonfuls of olive oil added to each injection, which ſhould conſiſt of near a pint of the liquor, and be applied every ſecond hour, rather warmer than on moſt other occaſions.

This method of giving *opiates*, in order to abate the extreme ſenſibility of the nervous ſyſtem, and keeping the belly freely looſe at the ſame time, ſeldom fails to remove the diſeaſe; provided that proper care and a ſuitable diet be obſerved. But ſome uneaſineſs will ſtill be perceived at times; or even a relapſe may happen, if only a ſingle pellet remains in the inteſtines, or the over-fulneſs that took place in the internal veſſels be not removed. Moreover, a plaſter of *galbanum* having ſome *camphor* mixt with it, ought to be applied over the belly, and worn as long as it will adhere. With reſpect to diet during the diſeaſe, it ſhould conſiſt

of

of weak broth ſeaſoned with *mace*, *pepper* and *aromatick* herbs, or thin ſtrained gruel having a ſpoonful of brandy added to it now and then. An infuſion of *mint*, or ſome other fragrant plant made with boiling water, as alſo of *cinamon*, *cloves* or *ginger* may be given in their turns for drink, with which a little diſtilled ſpirit may ſometimes be mixt.

Thoſe who are liable to the *nervous colick*, ſhould carefully abſtain from every thing that is cooling and relaxing, or which has a tendency to weaken the *tonick* force of the abdominal *viſcera*; from thoſe articles likewiſe of diet or drink, that are ſour or remarkably aceſcent, as wine and other fermented liquors; more eſpecially ſuch as are flatulent. And therefore *they* ought as much as poſſible, to live on animal food, whether of the land or waters, and drink water with about a fifth or ſixth part of rum or brandy; or ſuch a proportion of the latter as may ſuit the perſons inclination; but intoxication muſt be carefully guarded againſt; for nothing weakens the *nervous ſyſtem* more than exceſſes in this way.

When the patient is able, and the weather will permit, he ſhould ride daily on horſeback; for of all others, this exerciſe agitates the *abdominal viſcera* moſt, except leaping, which is a ſort of bodily motion, that is not much in the power of thoſe who are ſtill weak from diſeaſes. Walking indeed when it can be performed with little pain, is highly neceſſary to thoſe who are liable to *arthritick* complaints, chiefly in the feet and knees. But, *this* would not ſo ſoon have the deſired effect after the diſorder we ſpeak of, when the lower *viſcera* are intended to be ſhaken, and the congeſtions of the fluids, which took place in the veſſels there are to be removed; the whole vaſcular ſyſtem likewiſe

likewiſe being thereby made to act more forcibly, whence the ſeveral *ſecretions* and *excretions* will be more duly promoted. However, whilſt the bowels are yet tender, a broad belt, moderately tightened, ſhould be worn in riding; and the perſon ought on no account to fatigue himſelf. At this time an infuſion of *Peruvian bark*, *aromaticks* and *alkaline ſalts* ought to be taken every ſecond or third hour; but *rhubarb* or *ſal catharticum* ſhould alſo be added in ſuch a proportion, as to promote one or two ſtools daily.

This was my uſual way of treating the *nervous colick*. But to confeſs a truth, the method was either inſufficient, or the patients were ſomehow blameable; for ſo it was, that relapſes ſometimes happened again and again, and obliged the unfortunate perſons to ſeek for health in a different climate; by going to a cooler, if our ſummers diſagreed with them, or into a warmer if they ſuffered moſtly in the winter.

But I never knew one patient, who enjoyed a firm conſtitution, after having a palſy from it; for *that* ſhewed, a very *atonick* condition of the ſolids in general; ſo that, though he might have regained the uſe of his limbs, yet either a *rheumatiſm*, various diſorders in the bowels, convulſions or a train of other nervous ſymptoms in different ways ſucceeded, and ſhortened his life; for none of them attained old age, who had been thus affected; and whilſt they lived, it was in a very infirm ſtate.

I never ſaw either an inflammation or a ſudden death enſue from the *dry belly-ache*, ſo it was taken in hand early, and was properly managed; probably becauſe the *myſenterick nerves* and *branches* of the *vena portarum* are principally affected in this diſeaſe. Once indeed, I was called in conſultation

for

for a man, who was ſaid to have *this* complaint, but the pains had ceaſed the day before; and then, he was conſtantly and without ſtraining, throwing up a coffee-coloured humour of a cadaverous ſmell; and the ſame ſort of putrid fluid paſſed plentifully downwards. His countenance was ſhrunk and pale; the extremities were cold and livid; his whole body was bedewed with clammy ſweats, and he breathed in ſo ſtifling and laborious a manner, that, though the weather was very cold, he would not only have all the windows let up, but inſiſted that two perſons ſhould fan him briſkly. Moreover he lay quite naked; ſo great was the heat that ſeemed to be diffuſed all over him. Theſe ſymptoms together with a total failure of the pulſe in the wriſt, ſhewed death to be at hand, from a gangrenous ſtate of the *viſcera*. But, being quite ſenſible, he informed me, that the week before he had taken Peruvian bark in powder, to check an intermitting fever, without having been previouſly prepared for that medicine. The fever, indeed, was thereby prevented; but then an uneaſy fulneſs and diſtenſion was preſently perceived in the *abdomen* with ſome degree of oppreſſion about the *præcordia* and difficulty in breathing; and at times, a ſharp pain ſeemed to dart along the tract of the inteſtines; the belly being all this while bound. In leſs than forty-eight hours, this pain became fixt and very acute; being attended with a throbbing and vomiting of eruginous bile. His thirſt was inſatiable; and he complained of a ſenſation, as if fire was kindled in his bowels; his pulſe, I was told, being then rapid and hard. Theſe ſymptoms were ſo diſtreſſing, that he never ſlept till death cloſed his eyes, in the ſpace of ſeventy-two hours, from their commencement. This evidently was an *inflammation* of the inteſtines, which ended

in

in a mortification, and was wholly different from the *nervous colick*.

But gangrenes of thoſe parts are not always preceded by very acute pains or fever, and therefore the unfortunate patients as well as their phyſicians, may the more eaſily be deceived at ſuch times.

A robuſt man of a full and groſs habit, about forty-ſix years of age, who at times was troubled with a colick from acidity, ſent for me to viſit him, when he was ill of that complaint. I found him diſcharging much greeniſh coloured bile by vomiting; which was promoted with repeated draughts of warm water till it returned taſteleſs. Fifteen drops of *laudanum* were then given, by which means he paſſed the night calmly. As he had no ſtools for the laſt twenty-four hours, a warm laxative mixture, containing among other things, three or four drachms of magneſia, was on the following morning ordered to be given gradually till it operated. *This* wrought in a gentle manner, and with ſo good effect, that the complaint ſeemed to be entirely removed; and on the following day he went abroad about his affairs. But, as a thunder ſhower happened, and being anxious about ſome new hay which was curing in the field, he ſtood expoſed to the rain to ſee it put up. On his return home, being chilled by his wet clothes, he immediately put on dry ones, and drank ſomething warm. But, that night he perceived ſome degree of weight and fulneſs about the navel and towards the left *hypochondre*, which occaſioned a particular ſort of uneaſy reſtleſneſs, yet without either much pain or ſickneſs. Next day the abdomen became tenſe; without any acute pain; though he was not altogether free from one that was obſcure. He was, moreover, anxious and conſtantly in motion; changing his poſture often by walking, ſitting or lying

as

as he choſe; not being yet confined to the room, much leſs to his bed. All things, however, growing worſe, he was at laſt ſo unaccountably uneaſy, as to be ſhifting places inceſſantly; and on the third day he was ſeized with a vomiting of greeniſh coloured mucus; but that night the diſcharges began to be of a coffee-colour, and were in larger quantities, coming away with little or no ſtraining. All this time he did not complain of great pain, and had no ſtools ſince this laſt attack. On the fourth day in the morning, it being alſo the ſeventh from the time the colick firſt ſeized him, I was ſent for, a ſecond time, and found him ſitting up and almoſt conſtantly ſpurting out mouthfuls of a blackiſh-coloured *ſerum* of a putrid ſmell, which came up with a gulp as it were, and without any ſtraining at all. His countenance was of various complexions; being in ſome places of a purple and almoſt a livid colour; in others pale and bedewed with ſweat. The pulſe was ſmall and very irregular; the backs of his hands clammy, and he was evidently delirious at times; the diſeaſe tending faſt to a putrid diſſolution, and accordingly death enſued that evening. I mention this inſtance as a warning to thoſe, who, from the mildneſs of their firſt appearances, may, perhaps, ſlight the approaches of thoſe ſymptoms, that portend unnatural congeſtions of the fluids to be forming in the lax and pendulous viſcera.

One of the progenitors of a certain family here, was ſo miſerably afflicted with the *dry belly-ache*, that he quitted this country and went to France and Germany in queſt of a cure, which he at laſt obtained. His offſpring kept the preſcription ſecret, ſo that they alone were poſſeſſed of it, till I purchaſed it of one of the kindred; but ſince that time it has been made more publick, by the death

of

of one of the relations, and the papers falling into the hands of executors, who allowed copies to be taken of them. By purſuing the method therein directed, the *nervous colick* will for the moſt part be ſpeedily and ſo effectually removed, that it ſeldom returns, unleſs the conſtitution had already been greatly ſubdued by repeated attacks of it.

Their method of cure, ſets out with an uſeleſs diviſion of the diſtemper. In one caſe, a ſtoppage of urine and violent pain in the lower belly are ſaid to attend; and an exceſſive vomiting in the other, together with a pain in the ſtomach and belly, which brings on convulſions and a *palſey* of the arms, if the complaint be not abated in time. Bleeding in the arm or foot is recommended in both caſes, provided the patient be feveriſh. And after this operation, recourſe muſt be had to clyſters, made with one ounce of *coloquintida*, two drachms of *ſenna*, half a handful of *aniſe ſeeds*, and as much common ſalt boiled with water to ten ounces for one injection, which ſhould be repeated a ſecond and even a third time if needful, till a ſtool is promoted. But as the pain oftentimes continues, even after the clyſters have operated, about three jills of new milk muſt be made to boil, to which, juſt before it is taken from the fire, ſix grains of *opium* ſhould be added to make a clyſter, which ought to be retained as long as poſſible. *Poppy-heads* boiled with the milk will anſwer the end equally with *opium*. A mineral water muſt then be prepared, by diſſolving fifteen or twenty grains of Roman vitriol in about a pint and a half of ſpring water; of which a wine glaſsful muſt be drank on the following morning faſting, which commonly cauſes the patient to vomit; half an hour after another glaſsful of the ſame mixture muſt be given, and the like quantity at the end of

the next half hour. This courſe of vomiting muſt be repeated for three or four ſucceſſive mornings, or ſo long as any uneaſineſs is perceived within. * A pain at the ſtomach often remains after this diſeaſe; to remove which a doſe of rhubarb muſt be given and a plaſter of *galbanum* applied over the part.

* At the firſt view, one would expect but little good to enſue from the internal uſe of *Roman vitriol*. Yet in the diſeaſe we ſpeak of, as well as in *hyſterical* and *hypochondriacal* complaints, under certain circumſtances, and alſo in *dropſies*, that ariſe from a laxneſs and *atonia*, *obſtinate intermittents*, *bilious* or *ſerous diarrhœas* of long ſtanding, I have given it in ſmall doſes with ſucceſs, after other remedies had failed. When therefore, any extraordinary degree of general or even of local weakneſs takes place, as in the *catarrhal* conſumption, exceſſive diſcharges of the *menſes* and ſome other diſorders, and likewiſe when a continued over-diſtention (but without any inflammation) prevails in the abdominal veſſels, as is common in *hyſterical* and *hypochondriacal* complaints, I ſcarcely know a better medicine than this vitriol, ſo it be given with caution. For it not only diſcharges the veſſels of whatever might be redundant, but likewiſe braces them by its conſtricting quality; the effects extending, by a ſympathy of parts, to the ſolids in general. But were it not for the evacuations it promotes, it would be a dangerous medicine in the *nervous colick*, and ſome other diſeaſes.

A woman received twenty purging powders from an ignorant perſon in the country, with directions to take one every third day, for the cure of a carious ulcer on the *tibia*. Sixteen of theſe being uſed without the expected advantage, ſhe came to me, and amongſt other things deſcribing the manner in which theſe powders operated, I deſired to ſee them; ſhe then produced the four which remained, each of which, conſiſted of about twenty five grains of *Roman vitriol*, without any diſguiſe, and but coarſely prepared; no unlucky circumſtance perhaps for the patient. But though they always wrought roughly both ways, her appetite was keen on the intermediate days; nor was her health in anywiſe impaired, but rather improved by them; for they freed her of colicky complaints, to which ſhe had been liable for ſeveral years, before this courſe was undertaken.

This is the family preſcription with ſome variation in the words. But one of the relations who had for many years uſed it to great numbers of people, added oil and honey or melaſſes to the purging clyſters; and ſhe alſo aſcertained the proportion of the vitriol, which, by trials made on ſeveral of her compoſitions, I found to be in the quantity of one grain to an ounce of water; the doſe of which was a wine glaſs-ful given faſting for nine ſucceſſive mornings. For the firſt four or five days, this medicine diſcharges much eruginous bile both ways; but the excretion of this humour leſſens by degrees; and before the courſe is ended, it hath little other effect, than to cauſe ſome degree of ſqueamiſhneſs, and promote a few bilious ſtools; or it may not move the patient at all. Hence it ſhould ſeem, that the veſſels which before were overcharged, are by this time ſufficiently emptied, as well as ſtrengthened; if we may judge from the keenneſs of the appetite, quick digeſtion, and regular action of the inteſtines, which now diſcharge themſelves duly as in health. At the times of uſing theſe medicines, the diet ſhould conſiſt of meagre broth, made with lean meat, gruel or panado; but about the ſeventh or eighth day, thoſe who are impatient of ſuch reſtrictions, are allowed bread and boiled chicken; and a little rum is ſometimes mixt with the water they drink; but all fermented liquors and acids are ſtrictly forbidden. The cuſtomary manner of living is afterwards returned to by degrees, but with an admonition to abſtain from punch and other acids for the time to come.

With reſpect to the *nervous colick*, it ſeems difficult to account for it; for the pulſe being ſeldom quicker than in health, and ſometimes it is even more ſlow, the ſanguiferous veſſels ſeem to ſuffer in

in a ſecondary manner only in this diſeaſe; or no further, than that their *muſcular fibres* are affected with ſome degree of *ſpaſm*, if we may judge from the hardneſs of the pulſe. For did the cauſe act principally on the coats of the blood veſſels, a quicker pulſe and more diſordered circulation might reaſonably be expected. The *nerves* therefore ſeem moſtly affected at the beginning of this complaint, and in particular the *meſenterick plexuſes*; though others ſuffer by ſympathy, in the courſe of the diſtemper; but how this happens may ever remain a ſecret.

To impute ſuch diſtreſſing circumſtances, as well for the preſent as the time to come, barely to a coſtiveneſs of a few days, would be charging violent effects to a very unequal cauſe; beſides the conſequences of it ſhould ceaſe, when *that cauſe* is removed. Let us then ſuppoſe, that a ſmall degree of ſpaſmodick conſtriction acts on the outward habit, which gradually repels the fluids thence, ſo as to make them accumulate in the *meſenterick* and *other ſanguiferous veſſels* of the *abdominal viſcera*, which thus become ſo overcharged that they cannot exert their *ſyſtoles*. Whence it muſt follow, that the veſſels, which are thus affected, muſt continue preternaturally diſtended, till the ſpaſm and the local *plethora* it occaſioned are removed. And ſo long as this internal repletion remains, the *nerves* that accompany the blood veſſels there, and often make turns cloſely round them, muſt in ſome degree be compreſſed, overſtretched or both; and, therefore, their influence on the parts they are inſerted in, muſt be intercepted in proportion, if they have any power at all to actuate the organs. Hence it ſeems, that if the inteſtines are ſupplied with any of thoſe *nerves* that are thus diſordered, or with others which have a communication with

theſe, their *periſtaltick* motions muſt be either ſuſpended or performed more ſlowly, whilſt the obſtructing cauſe ſubſiſts. Beſides, the inteſtinal veſſels being equally overcharged with others, the *nerves* after their inſertion in the coats of the hollow *viſcera*, may likewiſe ſuffer in the ſame way, as thoſe of the *meſentery* were ſuppoſed to do. If theſe things be true, it ſeems evident, that the internal *ſanguiferous veſſels* muſt not only be cleared of this ſurcharge before the patient can be relieved, but, afterward, they ought to be ſtrengthened, ſo as to enable them to reſiſt ſuch another influx of the fluids, ſhould *theſe* be again impelled thither in the ſame way; elſe, from ſuch a prediſpoſition, a relapſe into this, rather than an attack from any other diſeaſe, may be expected.

I am not aſhamed to confeſs, that till the ſpeedy and laſtingly good effects of the above method were known to me, I could not form any ſatisfactory judgement of the diſeaſe we ſpeak of; though, perhaps, I may ſtill be miſtaken. Indeed, an overfulneſs in the blood veſſels, and a conſequent ſtretch or compreſſion of the *nerves* were ſuſpected even before; becauſe the cure always depended, on promoting frequent and plentiful diſcharges, directly from the parts in which the diſeaſe ſeemed to be moſt immediately ſeated, in order to empty one ſort of veſſels and ſet another free. The very ſtimulating clyſters that are required to rouſe the inteſtines to action, is a proof how much their natural motions are impaired; and the palſy, together with the obſtinate coſtiveneſs that commonly enſue from it, ſhew how far the *nervous* ſyſtem was affected, either primarily or by ſympathy. The many large evacuations likewiſe, that are made daily from the *abdominal* veſſels during the cure, plainly evince, how greatly they muſt have been

ſur-

ſurcharged; elſe ſurely ſuch proceedings would have had dangerous conſequences. The ſucceſs therefore, that attends this practice, juſtifies ſuch management, and in ſome degree, confirms the opinion I have given as to the immediate cauſe of the *nervous colick*.

When this diſtemper ends in a palſy, the experienced phyſician will determine, how far active *ſtimuli*, as repeated *bliſterings*, *frictions*, *cordial nouriſhment* and exciting *medicines*, the cold bath, exerciſe and a change of air will be neceſſary; as well as the moſt proper way and time for uſing them; but the patient commonly recovers ſooner, by going to ſea and altering his climate, as already hath been ſaid. Since *electricity* has been applied to medical purpoſes, I have not had an opportunity to try it in *palſies* from the *nervous colick*. But, as *they* ſeem owing to a want of incitement and weakneſs, moſtly in thoſe *nerves* that contribute to voluntary motion, it appears highly probable, that the cure would be ſooner accompliſhed, if the patient received repeated *electrical* ſhocks, twice or oftener in the day. For our bodies being full of juices, are excellent conductors of that fluid, which ſeems even to pervade the nervous and muſcular fibres. And, as it ſtimulates ſtrongly in paſſing, ſo it cauſes the *vaſcular ſyſtem* to vibrate more forcibly; and a briſker action and reaction being thereby excited, between the veſſels and the fluids they contain, *that intercourſe* which was ſuſpended between the *ſenſorium commune* and thoſe nerves that proceed from the *medulla ſpinalis*, will probably be thereby ſooner reſtored; and whatever obſtruction ſtill remains in the ſecreting canals; or if too great an accumulation of the fluids yet continues in the abdominal veſſels, *theſe* may be removed by thoſe means. Indeed, the *electrick* fluid ſeems ſome how

to correſpond in its properties, with the *vis nervea*. For when applied to us, it inſtantly cauſes a ſtrong convulſive contraction in the muſcles ſo far as it paſſes, which no reſolution of our own to the contrary can prevent.

From the above ſketch, compared with what hath been alledged in an eſſay I ſome years ago publiſhed on fevers, the reaſon will in part appear, why a *palſy* is brought on by the *nervous colick*; for a proportional degree of *atonia* muſt enſue, either from a continued conſtriction or extenſion of the animal fibres, whether of the *ſanguiferous* or *nervous ſyſtem*. Hence it probably is, that when the *nerves* ſuffer moſt in any diſeaſe, a *paralytick* affection ſucceeds; but if the arteries and other muſcular membranes were chiefly diſordered, a general debility muſt indeed follow, though ſtill the patient will have the power to move his limbs, unleſs he be already in the laſt extremity of weakneſs.

Did the pain within abate, becauſe the *paralytick* reſolution of the *nerves* had already begun, or their communication with the brain was in ſome degree interrupted? And were the *meſenterick plexuſes* at laſt ſo weakened, by the ſtretch or preſſure they ſuſtained, that they became inſenſible to painful impreſſions, though the cauſe that firſt brought on the diſorder ſtill acted, and perhaps, with greater power than before? Whatever of truth may be in theſe conjectures, the difficulty of ſwallowing, want of action in the ſtomach and inteſtines, the weak, ſlow and ſoft pulſe, and paralytick condition of of all the parts below the head, plainly ſhew, how generally relaxed the nerves are. Nay even the memory, ſpeech, and all the outward ſenſes are more or leſs impaired on theſe occaſions.

From

From the above circumſtances compared together, it ſeems pretty plain, that the common *ſenſory* is not injured during this ſort of *paralyſis*, further than that the nerves which proceed from it are weakened and unable to perform their functions, but without their communications with each other being abſolutely intercepted. And it alſo appears, from the exceſſive tenderneſs of all the muſcular parts, that a greater exertion of the *nervous* power is required to excite motion, than to communicate ſenſe.

If a review is made of what hath been ſaid on the effects of the ſummer weather in *South Carolina*, it will be ſeen, that many things, which befel the unfortunate garriſon of *Calcutta*, when one hundred and forty-ſix perſons, were ſhut up in a ſmall cloſe room, in the year 1756, happens alſo to us in ſome degree, during the above ſeaſon. *Theſe* people ſweated ſo profuſely, in a few minutes after they were confined, that their clothes were thoroughly wetted with it, and an intolerable thirſt enſued, which became ſtill more inſupportable in proportion to the exceſs of perſpiration; by which their bodies were exhauſted of fluids. In a few hours, the air in the apartment was ſo replete with ſuch urinous and volatile exhalations, as ſtrong ſpirit of hartſhorn emits, that it was quite unfit for reſpiration; and ſomewhat of the ſame *mephitical* nature, may likewiſe be perceived, in all the diſcharges that are made from thoſe, who for ſome days have ſuſtained an unnatural degree of heat, whether from fevers or otherwiſe. But in the inſtance we ſpeak of this might have been, in part owing, to the urinary contents of the blood, paſſing moſtly by the pores of the ſkin and lungs, the great heat of the place rendering *theſe* as well as the other humours that were thus diſcharged, preſently putrid; and the

almoſt inſtantaneous corruption of the bodies of thoſe who died, alſo proceeded from the ſame cauſe. What is further remarkable, and happens frequently to us, the wretched remains of that garriſon, broke out all over their bodies with painful boils, from the many obſtructions that were formed, by the exceſſive expanſion of the fluids, which ſo diſtended the greatly relaxed external veſſels, that they admitted fluids which were too groſs to paſs, when theſe veſſels were made to contract, and the blood likewiſe became more condenſed, after thoſe people were releaſed from their confinement, and expoſed to the cooler air abroad.

SECTION

SECTION II.

Of the EFFECTS of the WEATHER in AUTUMN.

Mediums of *Farenheit's* Thermometer in the Shade, and of the Rain alſo.

Months	Ther.	Rain
Septem.	73	6.71
October	67	2.61
Novem.	58	2.00
General	66	3.77

THIS arrangement of the autumnal months does not at all pleaſe me, though it is obſerved here in compliance with the common manner of dividing the months into ſeaſons, rather than that there is any great correſpondence between them with reſpect to heat; the two latter months only agreeing nearly as to the quantity of rain that falls. It will be ſeen in the general table, that the weather is as warm in September, as it is in May; though it rains much more in the former month. In October, the *air* is nearly alike both in its temperature and other ſenſible qualities, to that which

is common to April, and the weather is but a little colder in November than it is in March. For this reaſon, September had a place in the firſt ſection of this eſſay, which treated of the effects of heat and moiſture. But, as the air generally becomes cooler towards the end of *that* month more eſpecially at night, it is alſo retained here.

Towards the cloſe of September, the air often is twenty or more degrees colder at night than it was in the middle of the ſame day; and the difference may be ſtill greater in October, when the wind ſhifts from the ſouth to the north after rain; ſo that we frequently have, as it were, an *epitome* of all the ſeaſons, in the ſhort ſpace of twenty-four hours. From ſuch ſudden and great variations in the ſtate of our *atmoſpere*, and the conſequent quick and repeated ſucceſſions of conſtriction and relaxation, it is no wonder if diſeaſes ſhould then be common; for whatever depends on a mutual conformity between the ſolids and fluids, may eaſily be diſordered by thoſe means.

To produce dangerous effects, a change in the weather needs not always be great, ſo it happens ſuddenly. For an abatement only of ten degrees in the heat of the air, will ſenſibly affect many people, particularly at this time and earlier, tho' the mercury may ſtill riſe above the ſeventieth diviſion of the thermometer. On the other hand, if the day becomes twenty degrees warmer at noon, than it was, on the ſame morning before ſun-riſing, the ſtrongeſt perſon will perceive a liſtleſs ſort of diſpiritedneſs, though the mercury may not then be higher than the fortieth degree, or only eight diviſions above freezing, and more than fifty of thoſe degrees cooler than the natural heat of our bodies. Heat and cold therefore ſeem to act only in a relative manner, or in a *ratio* which is compounded,

of

of the paſt and preſent effects of the weather on us.

Cold air chills us, by its ſtimulus contracting the outward ſurface together with its contiguous veſſels, and checking the velocity of the fluids in them; the effect being proportional to the quickneſs and greatneſs of the change; the ſtrength or weakneſs of the veſſels, and the denſe or lax ſtate of the blood. Accordingly, thoſe who are robuſt will ever be leaſt affected either by heat or cold, as already hath been ſaid. And though a greater number of vigorous than of weakly people, may ſometimes ſicken during a very cold ſeaſon, *this* muſt be owing to the intemperate exerciſes *they* uſe, and their expoſing themſelves much abroad, together with other irregulaties; whereas thoſe who are of tender conſtitutions, generally keep cloſer at home; and being likewiſe better braced, *they*, as well as children, are commonly more healthy in the winter than in ſummer, provided the weather be but fair.

But as the irritability of the veſſels increaſes in proportion to their minuteneſs and diſtance from the heart, and the animal fibres being more diſpoſed to *ſpaſmodick* affections when weak, ſo the ſyſtem being comparatively lax in the autumnal months, the veſſels neareſt the ſkin (which is plentifully ſupplied with *nerves)* will, for ſeveral reaſons, be firſt and moſt conſtricted, on any conſiderable abatement of heat in the air. And *this morbifick* contraction will now be ſtronger from equal cauſes, than it was at the beginning of ſummer, or than it will be when the cool ſeaſon is further advanced; for the ſolids and fluids will then have acquired a greater degree of compactneſs than they have at preſent. Beſides, the blood in its preſent diſſolved ſtate, being circulated with a ſmall *momentum*, can but little

little reſiſt that tendency to contraction, which the ſolids are naturally endowed with; more eſpecially when they are ſtimulated by cold air, or otherwiſe. How eaſily the outward ſurface may be thus affected, even during the greateſt heat in ſummer, appears plainly from the abatement of *perſpiration* at night. For, though the air may only be about ten or twelve degrees cooler than it was in the middle of the day, when the weather is ſettled, yet *that* diſcharge will fall ſhort more than one half, in the ſame number of hours at night in June, but more eſpecially in July, unleſs people lie on ſoft beds and in cloſe rooms, which indeed would be almoſt inſupportably warm at this ſeaſon.

The fluids were ſaid to be ſo rarefied by the great heat of the weather, that the veins always ſeemed ſwelled and very full, though the veſſels were conſtantly diſcharging themſelves by a profuſe perſpiration as well as by all the other excretions. But, the blood may be ſo ſuddenly condenſed by an increaſe of coldneſs in the air, that it ſhall occupy a much ſmaller ſpace than it did before; when the veſſels will contract themſelves forcibly, for want of *that reſiſtance* which the fluids made before *this* happened. And as *this* conſtriction is eaſier brought on, ſo will it be ſtronger in weak than in robuſt ſubjects; for the blood being more denſe in the latter, and the heart and arteries having ſtrength to propel it with a proper *impetus* and *momentum* throughout the body, the *diaſtole* of the ſmaller veſſels will thereby be more regularly ſupported; whence an equal circulation and a due degree of natural heat will be maintained; for whenever the nervous and ſanguiferous ſyſtems are thus properly ballanced, the *equilibrium* will not ſo eaſily be diſconcerted.

When

When a *morbifick* cauſe brings on ſuch irregular contractions, as repel the blood from the external into the internal parts, the veſſels being *there* weak, will readily admit the unnatural courſe of the fluids, that is thus made upon them. But, as they cannot return the whole of the blood they were *thus* made to receive, it remains accumulated in them; and therefore leſs will be propelled to the external parts. For *that* reaſon, the *ſpaſmodick* conſtriction which acts there, will not only continue, but it may even gain on more veſſels; if *this* be not prevented; for *theſe* effects mutually augment each other.

It is plain, that the ſtronger this contraction, and the greater number of veſſels and other muſcular membranes it affects, the ſooner and more muſt *thoſe* of the *viſcera* and *brain* be overcharged, provided the *abdominal ſecretions* are not promoted in a ſuitable manner, to vent the redundant humours; for under ſuch circumſtances, no other evacuation will anſwer *that* end ſo naturally and effectually, as I have found to be true in numberleſs inſtances; the reaſon of which is ſelf-evident.

Hence we may in part learn, why *choleras*, *vomitings* or *purgings*; or for want of ſuch evacuations, irregular collections of the fluids and obſtructions in the *viſcera* ſhould be ſo frequent towards the end of ſummer and in the autumn? Why thoſe who have weak bowels, or are otherwiſe of an irritable conſtitution, ſhould ſo often be diſordered when the ſeaſon is changeable? Why variable weather is ſo hurtful to *colicky*, *hyſterical* and *hypochondriacal* ſubjects; to thoſe who have obſtructions in the *liver*, *ſpleen* or *uterus*; to *gouty* and *rheumatick* people; and to thoſe likewiſe in whom the veſſels in any part, had been weakened by former complaints; whether *theſe* proceeded from

from internal or external cauſes? Whence it ſhould be, that many *acute* or *chronical* diſorders may enſue, from the veſſels either of the *viſcera* or *brain* having their contractile ſpring impaired, ſo as to diſpoſe them to *plethorick* affections, owing to their having been permitted to continue too long in an overdiſtended condition, whether this happened from fevers, frequent and repeated ſurcharges of ſpirituous liquors or otherwiſe? Why a diſtenſion of the *abdomen* with ſtrong ſubſultory motions in the *epigaſtrick* and *hypogaſtrick* regions, are dangerous ſigns in diſeaſes, more eſpecially when the patient is already weak? Why elderly people may be liable to *diarrhœas*; and profuſe diſcharges happen both ways in fevers at this time and earlier in the ſeaſon? Whence it ſhould be, that in almoſt every painful diſorder, the ſymptoms are exaſperated in the evening, and rage till towards morning at this time and in the winter and ſpring? That on a change from hot to cooler weather, or even by letting freſh air into a cloſe room during a ſultry ſeaſon, thoſe patients who ſeemingly were ſunk in an extreme degree, and melting away, as it were, with colliquative ſweats, ſhall immediately be ſenſibly invigorated? Why, when the weather becomes fifteen or twenty degrees colder, contagiouſly malignant fevers, and thoſe that are called *nervous* or *putrid*, which depend on too colliquated a ſtate of the fluids, and great relaxation in the ſolids, the former ſhall be rendered ſo much the more compact, and the latter be ſo braced, that the ſick oftentimes recover, *who* were it not for *that* change, muſt aſſuredly have died? Whence it may be, that the *peſtilential diſeaſe* which we call the *yellow fever*, ſhall put off its malignant diſpoſition by degrees as the cool ſeaſon advances; and be no more ſeen when the air is forty or a few more degrees colder

than

than our blood? Why many people ſhould be giddy, on the firſt change from warm to cooler weather; and ſome may *then* have *lethargies* or *apoplexies?* How it happens, that on our being long expoſed to very cold air, the fibres become ſo rigid, that the muſcles are moved with pain; and why a drowſineſs ſhall afterward come on, a profound ſleep follow, and death quickly enſue if the patient be not relieved in time? Whence it is, that ſome people ſhall preſently appear fuddled on coming into the open *air*, who did not ſeem intoxicated, whilſt they ſat in a warm room? It ought however to be obſerved, that damp air is always colder than dry, ſuppoſing the ſame wind to blow and with an equal force; for the *former* paſſing through our apparel, not only conveys the cold *air* to the ſkin, but the wind alſo carries off that warm *atmoſphere*, which naturally ſurrounds our bodies. So that the effects which are here imputed to cold alone, will ever be aggravated by moiſture; and it may be with additional circumſtances.

Cold ſtrengthens us by contracting thoſe fibres which compoſe the flexible parts of our bodies; hence the veſſels, being made more *elaſtick*, they will vibrate with a briſker ſpring. And as the blood is likewiſe condenſed by the ſame cauſe, its gravity and *momentum* muſt be augmented in proportion. But as that condition of both, which conſtitutes a firm habit of body, muſt ariſe from a continued and efficacious mutual action between the ſolids and fluids, the blood is rather ſomewhat more viſcid, than duly compinged at this time; though the *grume* be indeed larger than it was in July and Auguſt; but ſtill it is ſoft and of a looſe texture. The *ſerum* alſo is leſs in quantity, and of a paler colour; which appearances, together with the

the increaſe of the red part, indicate an approach towards a better conſiſtence; for the contrary happened, the more the blood became attenuated, as the warm weather advanced in ſummer.

The change that our conſtitutions were ſaid to undergo, at the firſt ſetting in of the hot ſeaſon, begins now to be reverſed, by a contrary *temperature* in the air: and as *this* grows ſtill colder, *it* accordingly conſtringes the ſolids, of which thoſe of the external habit ſeem moſt ſenſibly to feel its firſt impreſſions, whereby the humours are impelled yet more toward the internal parts; *perſpiration* therefore diminiſhes, but the *urine* is augmented. However, as it may require ſometime to dilate the internal ſecreting organs fully, the diſcharges which are made from them, may not as yet be promoted ſo freely, as to compenſate for the abatement that enſues in perſpiration; and therefore the humours muſt now increaſe more in quantity, than the veſſels do in ſtrength: and *this* will more aſſuredly happen, if the weather be ſhowery or damp; owing to the plentiful abſorption of moiſture from the air. Hence a good hint is given us, for being moderate in eating and drinking at this time.

I would here be underſtood of *that* change which happens by degrees to thoſe who are in health; *this* being as neceſſary to our welfare during the approaching cold ſeaſon, as the contrary alteration in the courſe of the fluids was at the beginning of ſummer, when our lives were to be ſecured by a profuſe *perſpiration*; an increaſed ſecretion of the *urine* anſwering the ſame end in winter, by forcing from us the redundant humours through a different channel.

As moſt ſorts of intermitting fevers, will probably be common at this time, ſo may they commence with a ſenſible or even a ſevere *horrour*; and

and be attended with bilious vomitings; and a violent *head-ache* or a *ſtupor* will conſtantly accompany fevers, more eſpecially if the belly be bound, as it now generally is; nor can it be ſo eaſily looſened as before. To *this one* circumſtance of coſtiveneſs, the preſent *plethorick* condition of the ſuperiour and interiour veſſels, together with the acuteneſs of all the other very diſtreſſing ſymptoms, are evidently owing. And ſo long as the patient continues *thus* bound in his body, a clear *intermiſſion* can ſcarcely be expected. For, though the fever may abate, according to the uſual courſes of ſuch diſeaſes, a painful *laſſitude*, *head-ache*, *ſickneſs* at the ſtomach, thirſt, as well as a hard and too quick pulſe will remain, as proofs of a ſpaſm ſtill acting on the veſſels and muſcular membranes. However, I always give a decoction of *Peruvian bark* made with water in ſuch remiſſions, but then *laxatives* and *diaphoreticks* are added to it, in order to remove the *ſurcharge*, which evidently takes place within. As for *emeticks*, I have been warned againſt the general uſe of them at theſe times, by the ill ſucceſs I have ſeen from this too common but very unguarded practice; it being the opinion of many people, as well thoſe of our profeſſion as others, that a vomit ought to be given before the bark is adminiſtered, whatever the patient's condition might be; but the bad conſequences of ſuch a random manner of proceeding, hath already been taken notice of.

Though coſtiveneſs be moſt common to fevers at this time, as well as during the winter, yet in thoſe who have very lax *viſcera*, intermittents may ſtill commence as *choleras* do, or with large ſerous lymphatick ſtools. But, theſe diſcharges having anſwered the end, of abating whatever overfulneſs might have taken place in the interiour and ſuperiour

riour veſſels, *they* ſhould then be checked by the means we have already propoſed, when ſpeaking of ſuch immoderate evacuations. And as ſoon as an intermiſſion is procured, the *bark* ſhould be given with either *chemical oils*, *volatiles*, *alkaline powders* or *ſalts*, *ſtypticks* or *opiates*, according as one or the other of theſe medicines ſeem to be neceſſary; though in general, ſuch things as are of an inciting quality, ought to be added to the compoſition. The regimen in other reſpects, muſt be either plain or cordial as the caſe requires; but the latter will be moſt commonly wanted. I never add diſtilled ſpirits to the *bark*, when it is given in decoction; becauſe things of this ſort, by too much enlarging the doſe, make it more diſguſting; the great dependance now being on the quantity of *that* medicine, which can be taken during the intermiſſion; and indeed it may be adminiſtered in much larger doſes than is commonly believed. * Therefore, when the intermiſſion is ſhort and the paroxyſm long, the patient likewiſe being much weakened, I order a double, or even a ſtill greater quantity of *bark* to be given, and likewiſe ſhorten the time between the doſes, if the ſick perſon can poſſibly bear ſuch treatment. For inſtance, if a

* A captain in the navy, who has long ſince been dead, would not excuſe a man from duty, if he were but able to come upon the deck. This ſo terrified the ſailors, that when attacked with fevers, they requeſted me, if poſſible, to cure them at once. Foreſeeing the neceſſity for doing ſo, I always prepared them by clearing the firſt paſſages during the fever; and as ſoon as the paroxyſm was over, ſix or eight drachms of the bark in powder, being mixt with half a pint or more of the ſhip's beer, were given for one doſe; and it ſeldom happened, that thoſe men needed any more medicine, becauſe the diſeaſe was prevented before the conſtitution had been much impaired; and therefore it could, with but a little aſſiſtance, ſupport itſelf againſt any future returns of the fever.

patient

patient can take one drachm of the bark in powder, every hour, the fever would quickly be removed. And afterwards, were the ſick to take two or three ſuch doſes in the day for the ſpace of a fortnight, he might be pretty certain of eſcaping a relapſe. Should the ſtomach be ſo ſqueamiſh as not to permit us to purſue this method, either as to the quantity or frequency of the doſes, we then muſt not only leſſen but give them at longer diſtances of time. But to make up for this deficiency, a ſtrong decoction of the *bark*, or the bark itſelf in broth or other liquid muſt be injected by way of clyſters, though at the ſame time the patient ſwallows as much of it as he conveniently can, in whatever form he likes beſt. Mean while, the diet muſt be nouriſhing and ſpicy, given in ſmall quantities but often, and the drink made more or leſs *ſpirituous*; but, the latter ingredient muſt not ſo far exceed as to diſorder the head; though a ſmall effect of *this* ſort muſt not be regarded in caſes of great debility.

The *nervous colick*, *teneſmus* and *dyſentery* appear at this time; the two latter complaints in particular, being ſometimes very frequent. Some who abound with *acidity*, are ſo diſpoſed to *coſtiveneſs*, that a *tympanitck diſtention* of the abdomen enſues, with violent pains all over the belly. Either a ſtrangury or even a ſuppreſſion of urine are not uncommon in this complaint; and the teſticles likewiſe are at times ſpaſmodically twirled round, firſt one way and again the other; or *they* are drawn ſo ſtrongly upwards againſt the *os pubis* as gives additional torment; more eſpecially as theſe ſymptoms generally appear, when the pains within are moſt ſevere. The anxiety and difficulty in breathing are ſo great ſometimes in that complaint, that the patient cannot lie down; nor is it in his

power to expel the expanded air that thus oppreſſes him; ſo ſtrongly are the orifices of the ſtomach and the podex conſtricted. It therefore would be vain to give purges as things now are, for they might be rather injurious than uſeful, till the ſpaſms are abated, by ſetting the patient as low as his hips in warm water, and giving opiates. When a truce has been obtained by theſe means, active clyſters may be injected and warm laxatives given; the treatment here being the ſame in all reſpects, as if he had the *nervous colick*, except with regard to the uſe of *Roman vitriol*, of which I have no experience; though perhaps it might have as good effects in this as in the other diſtemper, after the inteſtines have been cleared of hard excrements. But when *this* latter point hath been accompliſhed, the overfulneſs that happened in the veſſels within being likewiſe removed, warm *tonick* medicines ought to be given for ſome weeks, to which gentle laxatives ſhould be added in caſe of coſtiveneſs. A light nouriſhing *alkaleſcent* diet with ſpicy ſeaſonings, muſt all this while be uſed; and for drink diſtilled ſpirits well diluted with water may now and then be allowed. The patient likewiſe, ought to ride daily, and briſkly too, if he can bear ſuch jolting.

Of the RHEUMATISM.

IF the cure of the *rheumatiſm* is attempted early, it may, for the moſt part, be effected in a few days, by giving *alkalized* purges daily or every other day according to the caſe; and in the evening, a ſufficient doſe of *Dover's* or *Ward's* ſudorifick powder ſhould be adminiſtered in order not only

only to expel ſome part of the *morbifick cauſe* through the pores, but alſo to abate the tenſion and pain which always will be moſt ſevere at night. I commonly bliſter the parts as ſoon as the diſorder fixes, or even afterwards, provided no inflammation or ſwelling hath yet appeared. By this method alone, a rheumatiſm has often been ſpeedily removed, which threatened a tedious illneſs; as that diſeaſe when it commenced with the like preſages, had formerly confined the ſame patients for ſeveral months in the winter.

If the perſon be ſtrong, the fever high, and the pains are already fixed on many parts, ſome blood ought to be taken away. But ſhould the diſorder affect the muſcles only and in a few places, poultices made with bread and milk and a ſmall quantity of opium, will give eaſe: applying the freſh leaves of *ſtramonium*, will alſo abate the pain; but if the herb be dry, it ſhould be boiled with milk, and afterward thickened to a proper conſiſtence for poultices with the crumb of bread or oatmeal, and renewed twice or oftener in the day, ſpread thick on ſoft leather. At the beginning of the complaint, more eſpecially when it is *muſcular* and no outward inflammation appears, the part may be bathed every third or fourth hour, with a mixture made with four ounces of brandy, half an ounce of ſpirit of *ſal ammoniacum*, and half a drachm of *opium*, covering it afterward with a flannel wrung hot out of the ſame compoſition, and laying a warm tile over *this*. The brandy and volatile ſpirit (but without the opium) will alſo aſſiſt in diſcuſſing thoſe ſoft ſlow ſwellings, that oftentimes remain on the joints, after the rheumatiſm; or a plaſter made with galbanum, a ſmall quantity of camphor and cantharides finely powdered, will nearly anſwer the ſame end; but the latter muſt be ſo proportioned,

tioned, as to act only as a ſtimulant without raiſing a bliſter.

This method of purging, and promoting ſweats with medicines which have a power of mitigating pain, abating the ſtricture of the ſanguiferous veſſels, and blunting the exceſſive ſenſibility of the nerves will ſhorten the complaint, when it had already been of long ſtanding, unleſs the patient be thought too weak to purſue it; but the debility muſt be great indeed, that obliges us to leave him to the diſtreſſes of a painful and tedious diſtemper, rather than to endeavour his relief by any reaſonable treatment that promiſes to ſhorten it. Beſides, the purges in ſuch caſes muſt not only be more gentle, but likewiſe given at longer diſtances of time; and the ſudorifick medicines ought alſo to be adminiſtered in ſmall doſes given every hour till ſweats are promoted.

I have often removed the *rheumatiſm* and *gout* at once, by giving ſix or ſeven grains of *Plummer's Ethiops* and about fifteen grains of *gum guaiacum* made in a *bolus*, on the firſt or ſecond day of theſe diſorders. But this medicine ought to be adminiſtered to thoſe only who are ſtrong; for it works roughly both upwards and downwards, and at the ſame time promotes profuſe ſweats. That the latter effect may not be prevented, a warm *bed-pan* muſt be carefully conveyed to the patient, without uncovering him, when he has occaſion to uſe it; and afterward he ought to lie in bed two days; yet without promoting ſuch plentiful ſweats as before, though a dry ſkin ſhould be guarded againſt. It is ſurprizing to ſee how great a diſcharge of greeniſh coloured acrimonious bile is made both ways on ſuch occaſions. Hence we have reaſon to ſuſpect, that *thoſe* two diſeaſes are occaſioned by ſuch ſharp humours; for *they* ceaſe when the circulating

culating fluids and firſt paſſages are cleared of them; the latter being the *ſources* whence the former are ſupplied with fuel to ſupport theſe diſtempers. Certain it is, that theſe painful diſorders, are not very common in the ſummer; not only becauſe the humours are much attenuated, but the veſſels alſo are then more lax and paſſable. Hence, the circulation is likely to be freer throughout the ſyſtem; and therefore, except in ſome particular conſtitutions, the danger of ſuch obſtructions being formed in the ſmall canals, will be leſs in ſummer than in the autumn, winter or ſpring, when the weather is not only colder, but more changeable alſo. Yet, notwithſtanding the ſummer weather is generally favourable to *gouty* and *rheumatick* people, theſe complaints ſometimes attack even in that ſeaſon; but I do not then venture to give the above ſudorifick without preſcribing afterward the *bark* and the uſe of the cold bath.

Of the SUFFOCATING or CATARRHAL PERIPNEUMONY in CHILDREN.

CHILDREN under ſeven years of age, are liable to *ſuffocating catarrhs*, but ſeldom afterwards ſo far as I have yet obſerved. This diſeaſe is ſo rapid in its progreſs ſometimes, that it proves mortal in a few hours; and the patient can hardly ſurvive the third day, unleſs *it* were ſlight or had been relieved by medicine; for, in my opinion, it inevitably muſt terminate in death, if it be left to take its own courſe.

It ſometimes comes on with a wheezing at once; but moſt commonly a ſhort dry cough, from anx-

ety, and ſome degree of heavineſs in the countenance, together with a hoarſeneſs and quick reſpiration when the patient is hurried by exerciſe or paſſion, give us the firſt notices of it. Such warnings, however, are too often ſlighted; for the child having little pain, no difficulty in ſwallowing, nor any perceptible fever, he will run about as in health; though he is obliged to ſtop at times, in in order to fetch breath. On the other hand, others become drowſy and dull at once; their countenances being fluſhed, the eyes watery, the jugular veins very full, and their necks ſeem ſwelled. I have likewiſe ſeen it follow the ſpurious *Aphthæ*, attended with a conſtant ſlavering or ſpitting; to which, when ſtopt by reſtringents or ſtypticks, the catarrhous peripneumony preſently ſucceeded.

From theſe appearances in this early ſtate of the diſeaſe, it may eaſily be diſcerned by any one, who is but moderately ſkill'd in the *animal œconomy*, that the veſſels in the *brain* and *cerebellum* are likely to be ſoon overcharged; becauſe the blood being already accumulated in the lungs, *theſe organs* cannot receive *it* freely from the heart; nor can *this* latter *viſcus* admit the whole of that which ſhould paſs to *it* from above. The fluids therefore muſt ſoon be too much collected in the ſuperior parts; the wheezing now increaſes faſt; breathing is performed with a rattling ſort of noiſe, which is made by the air in paſſing and repaſſing through the extravaſated *mucus*, with which the *bronchia* and *pulmonary veſicles* are ſtuffed; but which is too viſcid to be brought up eaſily. A dreadful ſtifling ſoon enſues, and the patients, not being longer able to keep up, fall down dead, as one may ſay, in the midſt of their play; for they preſently expire, as being ſuffocated by this *local exceſs* of their own fluids. Accordingly

cordingly when ſent for, I have ſometimes found *them* breathleſs with all their clothes on.

The pulſe though weak and ſoft, is ſeldom much hurried in this diſorder, till towards the laſt ſcene, which indeed is a ſhort one.

This diſtemper in many reſpects, reſembles *that ſort of peripneumony* which ſucceeds a quinſy; and probably is owing to a ſlight inflammation, together with an exceſſive repletion in the veſſels of the *glottis*, inſide of the *trachea* and laſtly of the *lungs* themſelves. It moſtly appears in foggy weather; or when a few warm damp days ſet in, after the air had been cold, whether it were rainy or dry before, more eſpecially if the patient had a cough previous to that change. A *coryza*, *hoarſeneſs*, frequent coughing with a profuſe expectoration of thin limpid ſerum; a plentiful diſcharge from the *pituitary* glands of the mouth and throat, or a running from the noſe, ſometimes precede this complaint; which appears with all its ſymptoms preſently after the excretions were abated, from whatever cauſe *this* might have happened.

In what manner theſe ſeveral affections, which ſhew a relative or local weakneſs of the veſſels belonging to the *reſpiratory* organs and the paſſages leading to *theſe*, ſhould be preſages of ſuch *catarrhous peripneumonies*, is eaſily to be conceived; and therefore all our endeavours ſhould be directed to prevent them if poſſible; by promoting the diſcharges that have already commenced, in order to free the parts of the ſurcharge they ſuſtain. It is true, that a ſpaſmodical contraction of the external parts, may and actually does contribute to this diſorder by cauſing the fluids to recoil on the internal veſſels; amongſt which thoſe of the *trachea* and *lungs*, ſeem, at preſent, moſt diſpoſed to admit and retain an overcharge, as being perhaps more

relaxed than others, by the preſent warmth and moiſture in the air; hence if they cannot clea themſelves of *this* overfulneſs, obſtructions or redundant ſecretions are likly enough to enſue.

From the blood being thus unnaturally directed towards the lungs, and the repletions this occaſions, together with the relative laxneſs of the pulmonary veſſels themſelves, ſo profuſe a ſecretion is made into the *veſicles* and *bronchia*, that they cannot receive a ſufficiency of air to give a full expanſion to the lungs; nor will the patient be long able to clear himſelf of this ſuperabundance of phlegm; ſo quickly and plentifully is it ſecreted; and ſo ſuddenly are the vital actions and *vis nervea* depreſſed.

If I judge rightly, from the obſervations which experience hath furniſhed me with, the cure of this very precipitous diſeaſe, depends on freeing the *organs* of *reſpiration*, as ſpeedily as poſſible, from this exuberance of *mucus*, which now clogs them; and repeating the ſame means as often as may be neceſſary; on diverting the exceſſive flow of the fluids, that at preſent is made towards the lungs,* to

* So lax and overcharged are the lungs and parts that lead to them; ſo ſtrongly are the fluids determined that way ſometimes, and ſo profuſe are the ſecretions in this complaint; that I have known the *pituitary* membrane to be ſeparated from its connexions, ſo as to hang without the noſtrils in the form of bladders filled with lympid *ſerum*. Theſe were ſaid to be *polypuſes*, though they appeared in the ſpace of a few hours only. But, if there was no *dangerous impropriety* in this notion (for they might have been called *falſe polypuſes* or by any other name, without any detriment to the patient) it certainly was a fatal miſtake in the gentlemen, who ſuppoſe *theſe* to be the cauſe of the preſent difficulty in breathing; *which* they ſaid would ceaſe if *they* were removed. Having declared my opinion of the diſeaſe to the child's relations, without being liſtened to, as they were prepoſſeſſed to the contrary, by what the others had ſaid in my abſence, I withdrew after informing ſome

to which the immediate cauſe of the diſorder is plainly to be imputed from the firſt, and which now ſupports the exuberant ſecretions; and laſtly, on removing the ſpaſm that acts on the external veſſels, which juſtly may be called the remote cauſe of all that happens.

At the beginning of this diſtemper, ſome blood ſhould be taken from the jugulars if the patient be ſtrong, and bliſters ought to be applied quite round the neck and between the ſhoulders. To clear the lungs for the preſent, and alſo to make revulſions from theſe parts, I commonly order one ounce of *manna*, a drachm of *ſal catharticum*, ſixty or ſeventy drops of *eſſence* of *antimony*, or a grain of *emetick tartar* to be made in a mixture with four ounces of water, of which one common ſpoonful is given every quarter of an hour, to a child four years old, till he vomits and purges. But ſtill as this *mucous* humour will be too plentifully ſecreted, to the great diſtreſs and danger of the patient, the *emetick* muſt be occaſionally repeated before the

ſome of them, that the patient had but a few hours to live. The operation being ſet about at noon, one of theſe *polypuſes* was brought away whole; but the other having burſt by the gripe of the *forceps*, the remainder of the looſened membrane was carefully picked out; ſo that both noſtrils were now cleared; but lo! death enſued at four o'clock the ſame day. Theſe indeed were accidental ſymptoms, and of remote concern, as being only appendages to the diſeaſe, which lay in the *trachea* and *lungs*; out of which had they permitted the extravaſated *mucus* to be *extracted* by an *emetick* mixture, which was at hand, and would have been given had not thoſe two men forbidden this, the patient might have had a chance to recover, though the polypuſes had remained where they found them. Some part of this note is certainly neceſſary, that others may be guarded againſt ſuch overſights in the like caſes; but I have been the more particular, as theſe gentlemen delivered their opinions with a *dogmatical ſupercilioufneſs*, which did not redound much to either their breeding or ſkill in the art of healing, as the event preſently ſhewed.

bronchia

bronchia are too much charged with *it*; for *his* ſtrength and *ſenſibility* will ſink, according to the degree of this local repletion.

Whether it be owing to the veſſels of the *brain* and *cerebellum* being overcharged and preſſing on the origins of the *nerves*, whereby the animal ſpirits are as it were intercepted or not, I am ignorant; but, certain it is, that their power ſeems greatly impaired in the *ſuffocating catarrh*. And for that reaſon, we muſt give larger doſes of vomiting and cathartick medicines in this than in moſt other complaints. It is alſo to be obſerved, that as it may be required to promote vomitings perhaps, every ſecond or third hour, or as often as the oppreſſed condition of the lungs makes *this* neceſſary, the purgatives are not always to be added to the mixture. For it will be ſufficient to keep the belly moderately looſe throughout the diſeaſe, provided the patient had been briſkly purged at the beginning of it. As *oxymel ſcilliticum* commonly works quickly, one ſpoonful or more of it may be given to anſwer the above purpoſe. But as it ſometimes promotes only one vomit, one or two tea ſpoonfuls of *tinctura ipecacuanha* had better be added to it, when it is found to have little effect of itſelf; or forty or more drops of *eſſence* of *antimony* will anſwer the ſame end as the above tincture.

Though the *ipecacuanha* and *antimonial wine* ſeem to act by promoting the excretions from the firſt paſſages only, yet by their *ſtimulus* they alſo are excellent *tonicks* and *diaphoreticks*. For by exciting the internal veſſels to briſker contractions, and without much heating the patient or rarefying the humours, a more regular circulation and an increaſed perſpiration will for the moſt part be brought about in fevers and other diſtempers. Therefore I

commonly

commonly add ſmall quantities of one or the other of *theſe* remedies to my preſcriptions; as well in acute as chronical diſorders, unleſs ſome particular circumſtance forbids the uſe of them.

The good effects that enſue from the outward application of *cantharides*, both as *ſtimulants* and *antiſpaſmodicks*, particularly in fevers of the depreſſed ſort, may probably depend on ſomewhat of the ſame nature. For, when the ſalts of thoſe flies mix with the blood, and are conveyed throughout the ſyſtem in the courſe of circulation, the veſſels, whether they be generally or locally weakened in their contractile ſpring, are made to act more powerfully, by means of theſe pungent ſalts ſtimulating their coats. However this may be, the effect of ſuch applications very commonly is, that whenever any overfulneſs takes place in the internal parts, provided it hath not been of too long ſtanding, and the arteries there are not greatly diſabled from exerting their *ſyſtoles*, *they* will be aſſiſted in clearing themſelves of the ſurcharge, by the increaſe of *tonical* force that is thus communicated to them: ſuppoſing, at the ſame time, that the proper means are uſing to abate the conſtrictions which act on the veſſels in other parts. Nor are *cantharides* leſs efficacious, in checking ſuch ſerous or colliquative diſcharges, as are common to ſummer diſeaſes; whether *theſe* are made from the *alimentary canal* or pores of the ſkin; for ſuch ſymptoms not only ſhew the ſolids to be greatly weakened, but that the fluids alſo are much diſſolved, owing to an *atonia* in the *nervous* and *laxity* in the *ſanguiferous ſyſtem*. But this by the bye.

In the ſuffocating catarrh, the patient ought every now and then to ſit in warm water as deep as his waiſt, for the ſpace of a few minutes at a time; care being taken that his linen is not damped;

damped; and being expeditiouſly wiped dry, hot bricks ſhould be laid at ſuch a diſtance from his ankles, as juſt to keep up a proper warmth in theſe parts, which alſo muſt be moderately covered, ſo far at leaſt as to defend them from the cool air. He ought to be placed in a half-ſitting poſture, in a well-aired room; and when he wants to go to ſtool, a warm chamber-pot muſt be put under him; the lower parts of the body being at the ſame time covered with a light blanket or quilt.

Of Nervous Asthma or Suffocatio Stridula in Children.

THOUGH this diſorder properly belongs to a different ſeaſon, than what we are now ſpeaking of, and it likewiſe differs in many particulars from the *ſuffocating catarrh*, I thought it beſt that theſe two complaints ſhould appear as it were together, ſince they both are ſeated nearly if not altogether in the ſame parts.

The *ſpaſmodical* or *convulſive aſthma*, happens moſtly, during a dry freezing ſtate of the air; or when children have been much expoſed abroad to a ſtrong *north* or *north-eaſt wind*; but at no time have I ever ſeen this or the preceding diſeaſe ſo frequent, that they might be numbered either among *contagious* or *epidemick diſtempers*; the ſubjects of them being but few; and the *ſuffocatio ſtridula*, appears much ſeldomer, than the other.

The *ſpaſmodick* aſthma attacks at any time of the twenty-four hours; but moſtly towards the evening or during ſleep; and then ſuddenly. It is indeed true, that it might have been forming before,

fore, though *this* paſſed unnoticed, more eſpecially if the patient had neither been hurried by paſſion or exerciſe, which might have precipitated the ſymptoms, when once they began to take place. Be this ſo or not, the perſon for the moſt part is ſeized at once, with more or leſs of a dry ſort of *hoarſeneſs* and great difficulty in breathing, in which the lungs ſeem to expand and contract with ſuch a harſh rattling ſound, as might be made by many ſmall bladders, were they ſhaken together in a cloſe place; but without that churning noiſe, which the air makes in paſſing and repaſſing thro' the extravaſated *phlegm*, which is collected in the *trachea* and its *ramifications*, in the *catarrhal* diſeaſe; though the breathing is as laborious quick and ſtifling in the former, as in the latter complaint. For, ſhould the patient lie down, but for a ſmall time, he will ſtart up ſuddenly, from the danger of immediate ſuffocation, and pant for *air* in a *gaſping* and *ſtrenuous manner*; ſo that the ſhoulders are heaved ſtrongly upwards in inſpiration; and both then and during expiration, the *abdominal* muſcles are violently agitated; nay the whole of the lower viſcera, ſeem to undergo as frequent and ſtrong concuſſions, and are as it were violently forced towards the *thorax*. The face is generally full and highly flushed; the eyes watery and red, ſo that the whole countenance ſhews ſigns of exceſſive diſtreſs; and indeed none can be greater than that which is at preſent endured, for the patient cannot be eaſy, but for a few moments, in any one poſture. The *carotid* and temporal arteries throb ſtrongly, and the jugular veins are extremely turgid; this whole ſcene being attended with conſtant toſſings about, anxiety, reſtleſneſs and ſuffocation. But, as the beſt that can happen, this melancholy condition of the patient, will ſoon

be

be put an end to by death, if he cannot be ſpeedily relieved of it.

That *this* diſorder ariſes from a ſpaſmodical *conſtriction* in the *organs* of *reſpiration* ſeems pretty plain, from the dryneſs of the parts; for though the patient is obliged to cough often, either from *anxiety*, or the *irritation* cauſed by the *plethorick* condition of the lungs, yet no *mucus* is thereby diſcharged from them, none being indeed ſecreted. And that this *local ſpaſm* is violent, appears from the weight of the *atmoſphere* not being able to overcome the *force* with which *it* acts. It is indeed true, that in the laſt ſtage of this complaint, the *trachea* and its *appendages* ſeem filled with viſcid phlegm; but as *this* period commences not an hour, or perhaps but a few minutes before death, when the blood is as it were at a ſtand in the extreme parts, and the *pulmonary* veſſels, as well as thoſe of the *brain* and *cerebellum*, are already ſurcharged in the higheſt degree, what remedy can then be preſcribed with any hopes of advantage?

As the *ſuffocating catarrh*, ſo is *this ſpaſmodical aſthma* moſtly confined to children under ſeven years of age; and the patient ſeldom ſurvives the third day, unleſs the complaint were mild, or it attacked only at intervals, as I once ſaw in a child two years old, in whom it returned every evening for a fortnight, and continued about ſix hours. The patient was recovered of this dangerous diſeaſe by taking the bark together with the briſkeſt *antiſpaſmodicks* in the intervals between the ſpaſms; though other means were not neglected in time of the *dyſpnæa*.

As to the method of curing this very *acute* and *dangerous diſtemper*, I wiſh it were in my power to preſcribe one, which would anſwer that purpoſe with any tolerable certainty. For after conſidering it

it as an affection of the *nervous ſyſtem*, I attempted to remove it with *antiſpaſmodicks* of different ſorts, warm bathing and ſteaming the lungs; but hitherto with no great ſucceſs; for it is ſo rapid in its courſe, that ſometimes we have but a few hours to deliberate on what is to be done, or to give the medicines time to produce their effects, were theſe ever ſo well adapted to the nature of the complaint.

The remedies that I have found to anſwer beſt, were *diaphoreticks*, *opiates*, and ſuch things as either abate the irregular determination of the *vis nervea* to the lungs, or divert it from the parts affected, by relaxing the local as well as the remote conſtrictions. Thoſe intentions I have ſometimes obtained by looſening the belly in the firſt place, and then giving opiates, *tinctura cantharidum*, *vinum benedictum*, and laying hot bricks at a convenient diſtance from the ankles; the repeated injection of ſmall quantities of warm water in which a few grains of nitre were diſſolved by way of clyſters; and holding a baſon with a decoction of *poppies* made in water conſtantly under the chin, that the vapours thereof may paſs directly to the lungs by inſpiration. It need not be mentioned, that the opium and antimonial wine ſhould be given in ſmall doſes now and then, or in ſuch a manner, that the latter may not ſtimulate ſo as to excite vomitings, though one or two pukes might do no harm. But though the patient may for a little while breathe eaſier after vomiting; yet, as the effects of ſuch an operation are not laſting, I ſhould think it wrong to add to his preſent diſtreſs by repeated retchings. And with regard to bliſters, as I have always obſerved the application of them to be of ill conſequence in *tetanick complaints*, or wherever the *nervous* power was unnaturally

naturally determined to certain parts, more than to others by ſome particular excitements, ſo as to ſupport continued *convulſive* conſtrictions there; I ſuſpected the uſe of theſe active ſtimulants, in thoſe caſes that ſeemed plainly to require ſedatives and topical relaxants, rather than that they ſhould be exaſperated by ſuch things as irritate ſtrongly. This objection to bliſtering however, is to be underſtood chiefly againſt their application to the neck or between the ſhoulders; but they may be laid on the remote parts as a *counter ſtimulus*, in order to promote a greater afflux of the animal ſpirits thither, in hopes to relieve the organs of reſpiration of the preſent exceſſive determination of *them*, that is made towards theſe parts.

It is however to be obſerved, that either the power of the common *ſenſory* is as it were ſo engaged to exert its influence on the reſpiratory organs, that it does not readily receive other impreſſions; or that a conſiderable degree of *inſenſibility* (owing to the fluids being accumulated in the brain) attends in this diſeaſe, that larger doſes of medicines are required here, than on moſt other occaſions; ſo that about four drops of *laudanum* and as many or more of *eſſence* of *antimony*, may be given every half hour to a child of three or four years old; increaſing or diminiſhing theſe proportions, of one or the other as they may be found neceſſary.

Further

Further Effects of the Weather in the Present Season.

THOSE who are far gone in *catarrhal* conſumptions, or indeed any other *chronical* diſtempers, moſt commonly die in October or November; and the chance will ſtill be more againſt them, ſhould the weather be cold, windy or wet; though they might have ſurvived a ſmall time longer, if it had been fair and warm. Theſe months alſo are unfavourable to *aged perſons*, who, if they eſcape *bilious* or *ſerous diarrhœas* are in danger of *catarrhal peripneumonies*, *lethargies* or *apoplexies*; the two latter attacking moſtly during ſleep; more eſpecially, if the patients went to bed with their feet chilled by a ſpaſm; the recumbent poſture favouring the unnatural flow of the fluids that is made, on ſuch occaſions, towards the veſſels of the brain. And for the like reaſon, many people who are liable to ſome degree of *plethorick* affection in the ſuperiour parts, or thoſe who have large heads, have a head-ache, or are ſomewhat ſtupid for a while after they riſe in the morning, or till they have for ſome time been in an erect poſture. And this will moſt aſſuredly happen, if they are waked ſuddenly, and get up immediately after.

At this time, pains in the ſide with coughs happen in fevers; but *theſe* will ſtill end in *quotidian* or *tertian intermittents*, ſo they be properly managed; and then a ſmall quantity of bark will remove them. *Tooth-aches*, pains in the *ears* and *jaws*, ſwellings of the *maxillary* and *parotid glands*, *ſerous* or *inflammatory quinſies*, and the *gout* and *rheumatiſm* may alſo be common. However, ſhould

the weather continue warm and moiſt, *autumnal fevers* will be frequent even throughout the month of November; but with ſome variation in the condition of the firſt paſſages; on *which one circumſtance*, the difference in the appearances of feveriſh diſeaſes, greatly depends in all ſeaſons.

SECTION

SECTION III.

Of the EFFECTS of the WEATHER in WINTER.

MEDIUMS of the THERMOMETER and RAIN for Ten Years.

Months	Ther.	Rain	
December	52	2.10	
January	48	2.03	
February	54	2.27	
General	51	6.40	Total of Rain.

AS hot or cold, dry or wet weather, as well as the various combinations of theſe ſenſible qualities in the air, depend greatly on the particular winds that blow at all times, great changes from one to the other are common with us, in the autumn, winter and ſpring. For in the two latter ſeaſons, particularly, it ſometimes will be from thirty to forty or more degrees colder in the morning than it was at noon the preceding day; and again it may be twenty-five or thirty degrees warmer at two P. M. than it was at ſun-riſe the ſame morning. But, theſe great variations are not ſo frequent, till to-

wards the end of December. However, as the wind does not blow from the South or Weſt for any long continuance of time together, in general, the air is more ſteadily cold in December than in the preceding month; and it continues ſo throughout January, and for the greateſt part of February; allowances being made for the intervals of a few days of warm weather, that now and then intervene, even in the middle of winter. Our ſolids therefore are moſt *elaſtick* in February: for which reaſon it hath a place in this ſection. For after a fever of twenty-four hours during the above three months, the blood coheres ſo firmly, that its grumous part ſwims deep in the *ſerum*, in form of an inverted cone, whoſe baſe will be more or leſs covered with a tough ſkin, (formed of coagulated lymph) which is either of a pale or yellowiſh colour; the *ſerum* alſo being clearer and much leſs in quantity than it was in the ſummer and autumn. But I am of the opinion, that in judging of the denſity of the blood, allowances ought to be made, for the effect cold air has on it, when it is expoſed thereto in a ſtate of reſt. Accordingly if bleeding be performed on a warm damp day, in winter, the blood will appear much looſer in its conſiſtence; than if the air were froſty and ſerene.

Excepting frozen liquids, all other bodies are contracted by cold; and the air or ſome other expanſive principle which is blended with our fluids, being thereby condenſed, in proportion to the degree of coldneſs, the globules which compoſe our humours, are made to coaleſce more ſtrongly; their weight and *momentum* being increaſed accordingly. And as theſe effects will keep pace with the degree of coldneſs in the air, ſo will they promote each other, by the more vigorous mutual action,

action, that is thus excited between the ſolids and fluids.

Whether cold air cauſes the ſolids and fluids to contract, by abſorbing or diſſipating ſome part of that heat, which is conſtantly paſſing from the interiour towards the exteriour parts of our bodies, and ſurrounds us as it were with a warm atmoſphere, in order to keep the outward ſmall veſſels in a flexible ſtate, doubtleſs it acts as a *ſtimulus*, in proportion to its degree, and the force with which it is applied. Therefore under the ſame poſitive temperature of the air, a high wind will chill us more than a gentle breeze. But, in whatever manner cold operates on us, the blood, as being, perhaps, the moſt eaſily compreſſible, is more immediately affected by it than the ſolids, though theſe preſently feel its effects; whence a greater reaction ariſes between them, and a briſker circulation and more vigorous diſplay of the nervous power will be promoted.

But, though the changes from warm to cold, are oftentimes ſo ſudden and great, as might be thought ſufficient (and much leſs changes would be ſo at another ſeaſon) to contract the outward parts ſo powerfully, as to repel the fluids in the moſt tumultuous and dangerous manner on the internal veſſels, yet *that* is prevented, by the preſent greater firmneſs of the conſtitution. For, however ſtrong the external conſtriction may be that enſues from ſuch a cauſe in the winter, the veſſels within ſeem there to have a competent ſtrength, to oppoſe whatever irregular run might be made of the fluids on them, in the way we mention. I ſpeak here of people who are in health; for, undoubtedly, ſuch great changes from heat to cold, have unfavourable and even fatal effects on ſome perſons.

The difference then, between the effects of cold air alone on ſtrong perſons, when it is not in an extreme degree, and what I call ſpaſm or a *morbifick* increaſe of *tonick* force in the arteries, ſeems to depend on *this*, that only the outward veſſels and membranes are affected by the former,* whereas the latter acts on the larger veſſels, and probably on the heart itſelf, whence a diſorderly or unequal circulation of the blood muſt enſue. But, from the *perſpiration* being more uniform in the winter, it appears, that not even the outward ſurface itſelf, is ſo conſtricted by ſuch extraordinary tranſitions, as it would be by much leſs ones in the ſummer. For the ſolids being very lax and irritable during the latter ſeaſon, ſmall cauſes have then great effects.

Excepting a cloſe ſultry and moiſt *air*, none is more pernicious, than *that* ſort of coldneſs in the *atmoſphere*, which is attended with high winds and great humidity. For as no clothes can prevent *this* dampneſs from penetrating to the ſkin, together with that degree of coldneſs it receives from the air, morbifick conſtrictions are eaſily brought on thereby in *thoſe*, who are much expoſed to ſuch weather; and even *valetudinarians* who are confined to their houſes or beds, are made ſenſible of bad effects from ſuch weather.

The diſeaſes of *this* ſeaſon, are *quinſies* of all ſorts, *inflammations* with great *tumour* round the *throat* and *neighbouring parts*; *inflammations* in the *trachea*, but moſtly among children; *inflammatory* and *catarrhal peripneumonies*; *convulſive affections* of the *lungs*; the *two latter* chiefly affecting weakly

* The *lungs* undoubtedly are moſt expoſed to the cold air; but from the inceſſant action of that organ, the rapid circulation of the blood there and its proximity to the heart, it may be better ſecured againſt bad effects enſuing from the above cauſe, than the remote parts are.

and

and aged people; *true* and *falſe pleuriſies*; *catarrhal fevers*; *hoarſeneſſes*; *coughs*; *coryzas*; *tooth-aches*; *pains* in the *ears* and *jaws* which frequently end in *ſuppurations*, together with other diſorders which chiefly affect the *thorax* and ſuperiour parts. The *gout* and *rheumatiſm* may alſo be common; and thoſe who are far advanced in life, may have *comas* or *apoplexies*. If the cough that is contracted at this time or afterwards, be neglected; or if it does not ceaſe early in the enſuing ſummer, a *catarrhal conſumption* ſucceeds, and almoſt certainly deſtroys the patient, in the beginning of the following winter, ſo the ſpitting be but plentiful, as it commonly is.

Of QUINSIES.

WHEN only the *uvula* and *tonſils* are inflamed, and the complaint is taken in hand early, I find no difficulty in removing it, by purging the patient and afterward keeping his body moderately looſe for a few days; applying a *mercurial plaſter* acroſs the throat; ordering him to breathe in the ſteams of warm water, through the ſpout of a funnel or out of a bottle frequently; and that he ſhould often ſip ſome diluting drink and thin nouriſhment warm. It ought to be obſerved here, that receiving the ſteams of warm water in this manner, hath infinitely better effects than any *gargariſm*. But then the water made uſe of for this purpoſe, ought to be of a ſuitable warmth; for if it exceeds in heat, the inflammation will be increaſed by it; and ſhould it not be warm enough, a ſufficient vapour will not be emitted. By theſe means, the obſtructing humours will be attenuated and made more paſſable; the

fulneſs of the veſſels abated, by the freer perſpiration that is promoted from the parts affected; and beſides the painful ſtifneſs that elſe would preſently enſue, from the great heat there, and which renders ſwallowing ſtill more difficult, will be prevented; ſo that the oftener the ſteam is uſed, and drinks are given; ſo much eaſier will deglutition be. But as it will probably be expected, that gargariſms ſhould be uſed, vinegar and water with a little honey will anſwer this purpoſe; to which I ſometimes add a ſmall quantity either of *crude ſal ammoniacum*, or common ſalt; the only objection againſt the latter being, that it increaſes thirſt, and the other is indeed nauſeous. Weak ſage-tea a little ſweetened with honey, or a decoction of figs, liquorice or barley, will ſerve for drink; as thin ſtrained gruel and a better ſort of chicken water will for nouriſhment.

The *tonſils* oftentimes are ulcerated as ſoon as the patient complains; in which caſe, the above method muſt be purſued. But when the inflammation is on the decline, I know no better *gargariſm*, than a weak decoction of the *Peruvian bark* together with *oak bark* and *myrrh* made with water, and agreeably acidulated with *alum* or *ſpirit* of *vitriol*; to which a ſmall quantity of *brandy* or of *red Port wine* may be added occaſionally. Or inſtead of boiling the *myrrh* with the other ingredients, one ounce of its tincture may be mixed with ſix or ſeven ounces of the decoction, to which the mineral acid may alſo be added. But ſuppoſing the ulcers to lie ſo low in the throat that the gargariſm will not reach it, a ſpoonful of the mixture muſt often be ſwallowed.

What benefit others might have found from *ſcarrifying* the *tonſils* when they are much inflamed, I know not; but for ſome years paſt, this hath not been

been done by my direction, becauſe of the ſpreading and deep ulcerations that generally follow from the ſmalleſt ſcratch made on them, during their preſent greatly diſtended ſtate. Indeed, when ſuppurations happen in theſe parts the tumours ſhould be opened with a proper inſtrument, but not broken with the finger, as I have heard is the practice with ſome; at leaſt they pretend ſo. But ſuch a proceeding, if not diſingenuous is coarſe and inelegant; theſe being much eaſier methods of opening the tonſils, when they really are ſuppurated; and here likewiſe ſuch deterſive gargariſms as above will be required.

Quinſies however, are oftentimes attended with higher degrees of inflammation; for the tongue and as far as can be ſeen down the throat, as well as the inſides of the noſtrils, will be of a gloſſy red colour, and much tumefied. In *this* caſe the middle of the tongue will ſoon be covered with a thick brown cruſt. Deglutition is extremely difficult, and ſometimes impoſſible; for the liquor will be repelled with great force through the noſe; and every attempt to ſwallow will give exceſſive pains in the ears. As a proof that the inflammation extends far, and has already reached the *euſtachian tubes*, and, perhaps, the cavities of the *maxilla ſuperior* or even further; for an acute pain is perceived in theſe parts: the countenance is enlarged and fluſhed; the eyes are dull and watery, the veſſels there being greatly diſtended. A remarkable fulneſs alſo appears acroſs the throat, which ſometimes reaches to the upper part of the *ſternum*. Many of the above ſymptoms, are plainly owing to the inflammation obſtructing the return of the venous blood from the parts above; and the expulſion of the liquor through the noſe, and pain in the ears, not only ſhew, that moſt of the muſcles

muſcles which ſerve to deglutition are inflamed, but alſo that the *pharynx* is in the like condition.

It is further to be obſerved, that whenever any conſiderable fulneſs happens towards the lower part of the *fauces*, ſome impediment being thereby given to the return of the venous blood from the contiguous parts, a much greater ſecretion will be made from the ſalivary glands than in health; in ſo much, that when the inflammation is extenſive, the diſcharge by ſpitting is, ſometimes, as plentiful, as in a ſalivation that has been brought on by mercury. This excretion undoubtedly helps to prevent a greater diſtention in the parts affected, as well as the ſpreading of the inflammation; and therefore it ought to be promoted by the relaxing and diluting means we have mentioned.

Bleeding, according to the age and ſtrength of the patient, and repeated purgings, may be required at the beginning of this acute diſeaſe. But, if the perſon cannot ſwallow, laxative clyſters muſt be injected ſeveral times in the day, till a ſufficient number of looſe ſtools is promoted. A bliſtering plaſter ſhould be applied quite round the neck, more eſpecially in the early ſtate of the complaint; and a baſon with hot water ought, almoſt conſtantly, to be held under his chin, that he may receive the ſteams of it in breathing. He muſt likewiſe exert his utmoſt reſolution, to ſwallow ſmall quantities of warm drink often, no matter if it ſhould return ſometimes through the noſtrils. For this purpoſe, whey made with vinegar or cream of tartar, barley water or a decoction of mallows made a little tart with vinegar, and more palatable with a ſmall quantity of honey, will ſerve; and thin ſtrained gruel or weak chicken-broth will ſuit for nouriſhment. The air of the patient's apartment ſhould be moderately warm,

and

and rendered ſoft and moiſt with the ſteams of hot water put in proper veſſels, when the weather is froſty; and if *it* be ſultry, the floor ſhould be ſprinkled with vinegar mixt with water. When it is neceſſary to have a fire in the room during a cold ſeaſon, the patient muſt lie at a diſtance from it; for nothing is more pernicious in this diſorder, than a hot dry air, the contrary to which is beneficial. In ſhort in this ſort of quinſy, much is to be done, in a ſhort time, in order to prevent the inflammation from ſpreading to the *trachea*, whence a *peripneumony* would enſue, and deſtroy the patient in a few hours; for I never knew one perſon recover of the latter diſorder, when it ſucceeded a quinſy.

An *angina* reſembling that which is called putrid, appears now and then amongſt us; but never *epidemically* that I have yet obſerved; nor does it agree in all circumſtances, with the deſcriptions I have ſeen of *that* diſorder, more eſpecially on its firſt onſet. This complaint appears in February, March and ſometimes in April, when the preceding winter had been mild and moiſt withal; but more frequently towards the end of ſummer, in the autumn, and at the beginning of winter, when the weather having before been very warm, changes ſuddenly to cold. The fever is high, the pulſe hard and tenſe, the ſkin hot and dry; the *velum palati uvula* and *tonſils* are greatly inflamed and intenſely red. The tongue is evidently ſwelled towards its root, and often is full of pimples, the whole of *it* being enlarged. The tip and round the edges of that part are red, and ſeemingly bared of the *epithelium*; but in the middle and more ſo towards the root, *it* will in a few hours be covered with a dark brown thick coat, which ſeems ſcorched and dry, as if the parts had been ſeared with a hot iron.

From

From the great heat and parchedneſs in the mouth and throat, an intolerable thirſt attends; but the patients will endure *this* rather than the exceſſive pain, that every attempt to ſwallow gives. The eyes are red, prominent and heavy; the countenance is much fluſhed and inflated; and from one angle of the lower jaw to the other acroſs the throat the parts are evidently enlarged and ſometimes hard.

At the beginning of this acute diſeaſe, I never doubted to follow the ſame *antiphlogiſtick* methods of evacuation, *&c.* as were propoſed in the preceding article; and very generally with ſucceſs. But, if this early ſtage had paſſed without any application being made for relieving the patient, or the remedies which were uſed proved ineffectual, all the parts within the throat, and ſometimes even the paſſages from thence to the noſtrils, will be overſpread with foul ulcers, the edges of which commonly are either of a darkiſh brown or ſhining white colour like lard. Before and even after theſe ulcers appear, ſome degree of *hoarſeneſs* and *ſnivelling* may be perceived; and if the inflammation ſpreads to the *trachea*, the voice becomes ſtill more hoarſe. A wheezing with great difficulty in breathing ſoon ſupervenes, and increaſes every moment, ſo that the patient quickly dies, when things have come to this paſs.

From the beginning of *this period*, the pulſe, which before was full, hard and tenſe, becomes ſoft and weak; but from the commencement of the more inflammatory or putrid ſtage, it grows ſtill ſmaller and more irregular. Happily, however, inſtead of the inflammation paſſing downwards, it moſt commonly advances forwards, in the manner that has been ſaid.

It is much to be regretted, that *this* diſorder ſhould be moſt common to children under ten or twelve years of age; many of whom are incapable of judging, with reſpect to the neceſſity for a compliance with whatever directions may be given; on the contrary, they will ſpurn with all their might againſt every attempt that is made for their relief.

Whenever theſe ulcerations appear, and ſuppoſing the windpipe and lungs not yet inflamed, the patient ſhould frequently be made to ſwallow a tea ſpoonful of a decoction of *Peruvian* and *oak bark*, and a ſmall quantity of myrrh made with water. But the harſhneſs of *this* medicine, ought to be ſoftened a little with honey or balſamick ſyrup; and if the child be weaned, it ſhould be made agreeably tart with alum or ſpirit of vitriol; for ſuch young-ones cannot uſe a gargariſm without ſwallowing it. But in older ſubjects, who will permit their throats to be cleanſed, a mixture made with extract of *bark*, tincture of myrrh, honey and ſpirit of vitriol, ſhould often be applied to the ulcerated parts with a ſmall mop, made either with lint or ſoft linen, or a bit of ſponge tied to the end of a probe; and the decoction of bark acidulated in the ſame manner ought to be ſwallowed freely, if *this* can be complied with; elſe it muſt be injected by way of clyſters every ſecond hour.

With reſpect to the *peripneumony* that enſues from a quinſy, I muſt confeſs, that hitherto, as is before hinted, I have been unſucceſsful in removing it. Something however, muſt be attempted; as by bliſtering between the ſhoulders and on each ſide of the *trachea*; keeping the belly freely looſe; ſteaming the lungs often with warm water and vinegar, or the former together with a ſmall quantity of ſpirit of *ſal ammoniacum*, in order, not only

to

to attenuate the mucus with which the lungs are now clogged, but alſo to excite a cough, by which the patient may in part free himſelf from it; and *emeticks* as *oxymel ſcilliticum*, or *eſſence* of *antimony*, may alſo be repeatedly given with the ſame view; though indeed, the relief which theſe or any thing elſe can now afford, will probably be but of ſhort continuance. All this while he ought to be raiſed to an half-erect poſture, and have his legs almoſt conſtantly immerſed in warm water, if this can be complied with without fatiguing him too much. In ſhort, every thing that can be deviſed muſt now be done, not only in order to make a revulſion from the lungs, but likewiſe to keep *theſe* parts clear and open for the admiſſion of air; becauſe the vital actions ſink or riſe, in proportion as that element is more or leſs precluded from entering thoſe organs. *

That

* Towards the end of June 1770, a puny *molatto* girl, who had been much extenuated by the hooping cough, was ſeized with a fever, attended with a ſerous *diarrhœa* of a very putrid ſmell; which in a few days, reduced her to an extreme degree of debility. But remiſſions of the fever being obſerved for ſome hours, a ſtrong decoction of *Peruvian bark* and *oak bark*, acidulated with *alum*, was given every hour at ſuch times; whereby intermiſſions of ſix hours were ſoon procured. The weather having been very ſultry and ſhowery for a month before, and ſtill it continuing ſo, the virtues of theſe bracing medicines were ſo powerfully counteracted thereby, as made it difficult to check the fever in *this* and all other patients, notwithſtanding the cloſeſt application of remedies, and a reaſonably free uſe of wine. Thus ſhe went on for three weeks; when a very offenſive ſmell was perceived for ſome days, which no one could account for. At laſt her voice being low and hoarſe, the throat was inſpected, when the left *tonſil*, that ſide of the *velum* and one half of the palate were found to be in a frightfully mortified ſtate and covered with thick black ſloughs, of the colour of burnt cork. This was the more ſurpriſing, as ſhe never had any difficulty in ſwallowing either before or at this time. It is pretty evident here, that no obſtructions were

That ſort of quinſy which at once affects the voice with a cough and hoarſeneſs from an inflammation, or even an overfulneſs in the veſſels of the *larynx* and *wind-pipe*, is of all others the moſt dangerous, and requires the ſpeedieſt relief. Though a redneſs or ſwelling may not appear in the throat, nor the ſwallowing be at all difficult in this diſeaſe, it will nevertheleſs be known from the heat and pain that are perceived in theſe parts, when the patient can explain his feelings; the fever and irregularly hard pulſe; a hoarſeneſs, which however is moſt diſtinguiſhable at the time of coughing or crying; a reſtleſſneſs and difficult inſpiration, and a frequent

were originally formed in the ſanguiferous veſſels; but that *this* mortification was owing to the *ſphacelating* and *putrid diſpoſition* of the humours. But how it ſhould be, that *theſe* parts only were thus affected, when the fluids were ſo generally tainted, I ſhall not here enquire. However, conſidering her great weakneſs, the caſe was judged to be deſperate; yet ſhe recovered by the methods above laid down. I forgot to mention that in the courſe of this fever, ſhe had the thruſh in a very ſevere manner, and that ſhe loſt her hearing and became fooliſh; but ſhe recovered her ſenſes as ſtrength was regained.

As the above hot moiſt ſeaſon continued from the firſt days of June to the middle of Auguſt, a remarkable tendency to putrefaction appeared in many people; and even when no perceptible fever preceded.

A ſlender negro girl about fourteen years of age, who had been liable to bleedings from the noſe at times ſince the warm weather ſet in, began to have hemorrhages from the gums about the middle of July; the blood which was diſcharged being very thin. In a few days and without any previous pain, a number of *mortifications* were perceived on her tongue, gums, inſides of the cheeks and lips, many thouſands of black ſpecks being likewiſe diſperſed from the crown of her head to the toes, ſomewhat reſembling thoſe *petechial* appearances, that are common to *malignant fevers*, but larger. Scarifications being made where neceſſary, the methods mentioned above were purſued; and the uſe of the bark with mineral acids being continued for ſome time, ſhe acquired a better ſtate of health than ſhe had ever enjoyed before.

dry cough, owing to an oppreſſive ſort of ſtifling, which proceeds from the blood being too much accumulated in the lungs and about the *præcordia.*

Bleeding, and keeping the belly freely looſe, will be required on the firſt and ſecond day of this diſeaſe; but *antimonials* ſhould be joined with the laxatives; breathing in the ſteam of warm water, and ſupping warm drinks often, but in ſmall quantities at a time, have alſo excellent effects; bliſtering the neck and along the courſe of the windpipe at the beginning of the diſorder, will likewiſe be neceſſary. In ſhort, this complaint ſhould be conſidered as a moſt acute peripneumony; and therefore it ought to be treated as that diſtemper uſually is in its firſt ſtage. However, it is much more rapid in its progreſs, and terminates ſooner either in the recovery or death of the patient, than the other commonly does, when it proceeds to an expectoration.

Children under ſeven years of age are moſt liable to this ſort of inflammation, who unfortunately will not be prevailed with to drink ſo often as they ought; nor can they uſe the ſteam in the manner that would be moſt ſerviceable to them. Therefore a baſon with hot water ſhould always be held near the mouth and noſe, whether they be aſleep or awake. Mortal as this diſeaſe generally is, I have recovered ſeveral patients of it, by treating them in the above manner. In particular a child three years old, was as ſuddenly as dangerouſly ſeized with it; the ſymptoms from the firſt ſeeming to threaten a ſpeedy and fatal iſſue. This patient would not ſuffer any medicine to come near his lips, that he could diſtinguiſh by its taſte or ſmell, without oppoſing thoſe who attempted to give it, with all his might, and throwing himſelf into violent paſſions; which as much as poſſible

ought to be avoided; for nothing can have worſe conſequences at ſuch times. Some blood being taken away and a poultice made with muſtard and water applied acroſs his throat, from ſix to ten drops of eſſence of antimony were given every hour in his drink. This kept his belly ſufficiently looſe, and alſo promoted a conſtant moderate ſweat; by which means, together with the ſteam of warm water, which night and day was held under his chin, both the inflammation and fever were removed in the ſpace of thirty-ſix hours. But a cough, together with a pretty plentiful ſecretion of mucus, remained for ſome days, as always muſt happen from every diſeaſe, in which any difficulty in breathing takes place. The warm ſteam was alſo of great uſe, in procuring an eaſy diſcharge of this extravaſated humour; which, elſe would acquire a conſiderable degree of viſcidity, by lying as it were in a ſtate of reſt, and the loſs of its thinner parts by abſorption, as well as *their* paſſing off by expiration. And the veſſels alſo, in which theſe obſtructions happened, were by the ſame means relaxed and made more paſſable to the fluids; a free perſpiration likewiſe being thereby promoted from the affected parts.

The firſt favourable ſigns in this complaint are, an abatement of the hardneſs and frequency of the pulſe, a general ſoftneſs and moiſture on the ſkin, with an equal and more moderate heat diffuſed over the body, and a ratling of looſe phlegm in the wind-pipe and lungs, *which* being diſcharged by coughing, breathing is thereby relieved. Young children, indeed, ſwallow this *mucus*, but without any ill conſequences; for it matters not, whether it paſſes by ſtool, or is diſcharged by ſpitting; the great intention at preſent being to clear the reſpiratory organs of thoſe extravaſated humours, and

by that means leſſening the overfulneſs which oppreſſed them. And, becauſe the patient's ſafety greatly depends on promoting *this ſecretion*, and making *it* fit to be diſcharged freely, cold drinks and too cool air, ſhould carefully be guarded againſt. Yet he ought not to lie near a fire; for ſuch a hot and dry air, would in the higheſt degree be pernicious.

I will juſt obſerve here, that from catching the ſlighteſt cold, many people are liable to inflammations of the *tonſils*, owing to the laxity of the veſſels there, which diſpoſes them to admit and retain a ſurcharge of the fluids, whenever *theſe* happen to be repelled from the external to the internal parts. This local weakneſs might at firſt be occaſioned, either by continued or repeated over-diſtentions in the veſſels there. But, as the *tonſils* are now flabby and large in ſuch ſubjects, they ought to be *braced* with *ſtyptick* and *conſtringing gargariſms* uſed frequently throughout the day, during the intervals between theſe inflammations, and by waſhing behind the ears and all round the neck morning and evening with cold water mixed with a little brandy. The gargariſm may be prepared with Peruvian and oak bark, either infuſed cold with claret or red port wine, or boiled with water, to every ſix ounces of which, two ounces of brandy, and as much alum or ſpirit of vitriol as will make it tart, ſhould be added. I have ſometimes reduced the unnatural ſize of thoſe glands, by directing them to be moiſtened three or four times daily with ol. tart. per deliq. or a proper inſtrument made almoſt red hot, may be paſſed through them, which will cauſe theſe glands to ſhrink and contract themſelves.

Of

Of the SEROUS QUINSY.

SEROUS *Quinſies* have been mentioned; but in the years 1744 and 1768, a *quinſy* of that ſort which is called the *mumps*, was epidemick amongſt us; and *it* alſo appeared at other times, but not in ſo general a manner. It commonly attacks with more or leſs fever, and preſently a ſwelling will be perceived under the chin, which continues to increaſe for a few days, ſo as to extend itſelf ſometimes from the temples quite to the clavicles, and all round the neck; but the greateſt ſwelling happens moſtly, acroſs the throat from one ear to the other, projecting outwards, in a manner that much deforms the patient. The danger however is not great; for I never heard of one perſon dying of this complaint. In general, *deglutition* is but little obſtructed; for the *uvula* and *tonſils* are ſeldom ſo much enlarged as the other glands, that lie within the mouth, or in the forepart of the neck; but the patient hath ſome pain in opening his jaws. Yet, large as this tumour may be, the colour of the ſkin is rarely changed; nor is there any extraordinary heat or acute pain in the part when it is touched, as happens when the ſanguiferous veſſels are obſtructed.

When the tumours are of ſo large a ſize and extent as we have mentioned, the fever generally is high, the head greatly confuſed, and a painful throbbing is perceived in the ears, the eyes alſo being dull and watery; and, in ſome, breathing is difficult. Perſons of all ages are liable to this complaint; but women and ſucking children, I think are leſs ſo than men; and it alſo appears that thoſe who have once paſſed through it, eſcape it for the future.

It is very ſingular, that when the tumour abates on the ſuperior parts, a *tranſlation* of the *morbifick* cauſe (the whole of which, perhaps, was not yet diſcharged) is often made to the glands in the arm-pits, breaſts and groins, but moſt frequently to the teſticles in men, with an enormous ſwelling, exquiſite pain and a redoubled degree of fever. The like *metaſtaſis* is made, either to the arm-pits or breaſts, but more rarely to the groins in women. Theſe ſymptoms taken collectively, plainly ſhow, that this complaint ariſes from glandular obſtructions, owing probably to ſome degree of *viſcidity* in the *ſeraus* and *lymphatick* juices.

When the diſorder is ſlight, it will be ſufficient to divert the courſe of the humours from the ſuperior parts, with warm diaphoretick purges repeatedly given, and confining the perſon to his room, if the weather be cold or damp. But ſhould the complaint proceed to the high degree we ſpoke of, ſome blood muſt be taken away, if the patient be ſtrong and the fever high; and there may even be a neceſſity for repeating this operation when the *teſticles* are inflamed. In the firſt period of the diſeaſe, a bliſter ſhould be laid between the ſhoulders; and briſk purgings will likewiſe be required on the firſt and ſecond days; but afterwards it may be ſufficient to keep the belly moderately looſe, till the ſwelling ſubſides. The mouth and throat ſhould often be gargled with muſtard whey, to which a few drops of ſpirit of hartſhorn or of *ſal ammoniacum* ought to be added when it is uſed, in order to promote a diſcharge from the *ſalivary* glands; and other *apophlegmatizers* may alſo be tried at times. Every ſix hours, the ſwellings muſt be fomented with a decoction either of *camomile flowers*, *fennel*, *wormwood*, or ſome other moderately warm plant made with water; to each quart of which,

which, two ounces of brandy, and one hundred drops of ſpirit of *ſal ammoniacum* ought to be added, when it is uſed. Covering the parts afterwards with a poultice made with the ſame liquor and *oatmeal* or *crumb* of *bread*. But as the ſpirits muſt not be boiled with the other ingredients, one ſpoonful of brandy, and twenty or thirty drops of the volatile ſpirit, ſhould be mixt with the cataplaſm juſt before it is applied. I ſhould have obſerved, that becauſe of the exquiſite *ſenſibility* of the *teſticles* when they were inflamed, I never ventured to uſe brandy or the volatile ſpirits; but had recourſe to fomentations made with *fennel* or *camomile flowers* and a ſmall quantity of *ſtramonium* or *poppy heads* as ſedatives, boiled with three parts of water and one of vinegar; of which liquor poultices were likewiſe made, and applied with a ſuitable bandage to ſupport theſe parts; for without ſuſpenſion, the pain will be much aggravated.

Of other Affections of the Mouth and Throat.

An *eryſipelas* with a pretty high fever, ſometimes overſpreads the roof of the mouth, and as far as can be ſeen down the throat, with great heat and pain, and difficulty in ſwallowing. But theſe *ſuperficial inflammations* will in a few days yield to purging, ſipping warm diluting drinks frequently, and breathing in the ſteam of warm water, and a ſmall quantity of vinegar.

A lodgement of the ſerous humours is now and then made on the ſalivary glands and membranes of the mouth and throat, which are much enlarged

and thickened, attended with a conſiderable degree of fever, but without any redneſs. The *uvula*, in particular, may be ſo enlarged and lengthened, as to hang on the tongue and *epiglottis*; whence a troubleſome cough or retching to vomit ſometimes enſues. This diſorder is ſeldom dangerous, and may eaſily be removed when taken notice of early, with purges of the warm and *diaphoretick* ſort; ſteaming with warm water, vinegar and a little brandy; bliſtering, or applying poultices of muſtard acroſs the throat, and keeping the patient duly warm. And when the fulneſs of the parts begins to abate, a little claret or red port wine mixt with water and made more tart with ſpirit of vitriol or alum, may be uſed by way of gargariſm; or a ſmall quantity of brandy, added to a weak decoction of camomile flowers or *laurel* berries and the *Peruvian* and *oak bark* made with water, will anſwer the ſame purpoſe of reſtoring the relaxed parts to their proper tone. Yet, this decoction ſhould not be made ſo harſh, as to require being ſoftened with honey or ſugar; for ſuch relaxants do not correſpond with the preſent intention.

A dropſical ſwelling of the *uvula*, is a tedious and troubleſome rather than a dangerous complaint. But after having been of ſeveral weeks or months continuance, I have removed it in a few days, with the ſteam of *camphorated vinegar*, ſtyptick and ſpirituous gargariſms, the *baſis* of which was a decoction made with *Peruvian* and *oak bark*; and bliſtering acroſs the throat. The *ſteam* and the *gargariſm* will anſwer much better, and the patient will be leſs liable to a relapſe into the like diſorder, if the ſerous humours are firſt diſcharged by one or two punctures made with a lancet. And in this caſe Peruvian bark with other conſtringents ought

ought to be given internally from the beginning; but gentle laxatives ſhould be mixt with them for the firſt two or three days. And as ſoon as the patient can do it with ſafety, he ſhould waſh his head and all round the neck daily with cold water; or have cold water pumped on thoſe parts.

Of Inflammatory Pleurisies and Peripneumonies.

IN another eſſay, I propoſed a method for curing inflammatory *pleuriſies* and *peripneumonies* in their early ſtages; for if theſe diſeaſes cannot be removed before the end of the fourth day, an expectoration muſt enſue,* and then, even under the

* Should the fever ſtill continue, notwithſtanding the means that were there propoſed had been uſed, it may juſtly be eſteemed a good ſign, for the ſpittle to be brought up with but little coughing, on the third or fourth day; and this ought to be tinged with blood; for it ſhews that the *ſecreting* organs are dilating, and, conſequently, that the expectoration will ſoon be free and plentiful, if nothing happens to prevent it, whether from the admiſſion of cold air, either to the outward ſurface of the body or lungs, or the uſe of cold drinks. And therefore theſe never ſhould be allowed in highly inflammatory diſeaſes, in which the veſſels are already too *elaſtick*. It will alſo be of uſe in theſe diſeaſes, as well as others in which the fluids are unnaturally determined to any one particular part, that is immediately neceſſary to life, to intercept the returning blood in the veins, by making temporary ligatures on the thighs and arms, in order to diminiſh the force of the heart and arteries, at leaſt for the preſent; but *this* never ſhould be done, when the expectoration hath become free, or the patient is much weakened by the continuance of *this* or any other acute diſorder; unleſs we may perhaps except ſuch *hæmorrhages* in either ſex, as ariſe from internal cauſes; and even then, it ought not to be practiſed, when the patient is much exhauſted.

moſt promiſing circumſtances, the patients have only a chance to recover, becauſe *that* may be ſuppreſſed by various accidents, when death muſt follow, if the ſpitting cannot be ſpeedily renewed; but experience convinces us, that *this* is not ſo often in our power as we could wiſh.

The expectoration may indeed be checked or prevented by other cauſes; but as *this* moſt commonly happens from catching cold, the tonick conſtriction that before acted on the external ſmall arteries, will not only be increaſed thereby, but made to communicate itſelf to others, amongſt which, thoſe of the *lungs* now evidently ſuffer in like manner. For without ſuppoſing, or rather granting, that the *pulmonary veſſels*, which juſt before were ſo dilated and lax, as to permit a profuſe ſecretion to be made from them, are at this time in a contrary ſtate, we cannot conceive, why the *like diſcharge* ſhould not ſtill proceed from them; whereas in truth, *it* ought, for the preſent, to be augmented by *this accident*, which aggravates the cauſe that firſt brought on the ſpitting, and makes *it* to act more forcibly than it did before; whereby the fluids will be directed in a ſtill fuller ſtream towards the lungs. The local *repletion*, therefore, that before took place in them, muſt be augmented in proportion, as the *ſecretions* likwiſe ſhould be, were they not prevented by the *ſecreting canals* being ſpaſmodically affected, or ſome ſuch cauſe, call it what you will. But though the fever together with the other ſymptoms, muſt aſſuredly be exaſperated by this ſtronger and more extended *contractile* force in the veſſels, yet the worſt is to be dreaded, from what happens in *that* way to thoſe of the lungs; the ill effects of which advance ſo faſt, that we have but little time either to remove the preſent or prevent the future. Here then it is plain,

plain, that a greater regard muſt be had to this oppreſſed condition of the reſpiratory organs than to the pulſe; which, however promiſing *it* may ſeem to thoſe, who accuſtom themſelves to judge of diſeaſes by *that* only, cannot long continue ſo, if a more regular diſtribution of the fluids is not brought about, or the veſſels of the lungs are not eaſed of the overcharge that now takes place there, by a ſuitable excretion being made from them.

On this notion of a more general increaſe of *tonick* force in the *ſanguiferous canals*, my practice is regulated at thoſe dangerous times; and, if I miſtake not, it points out the neceſſity for abating the unnatural conſtrictions, not only of the external veſſels which firſt brought on the diſeaſe, and now enhances the danger, but likewiſe for removing the local *ſpaſm*, which acts on the *pulmonary* and *bronchial arteries*, that, if poſſible the ſpitting may be renewed; for on *this* principally depends the recovery of the patient.

If the belly is bound, a clyſter ſhould be injected, in order to promote a few ſtools, as well to clear the inteſtines of hard excrements, as to leſſen the dangerous *plethora* that now takes place in the *thorax*; and hot bricks ought to be laid at a proper diſtance from the feet and legs; but then care muſt be taken, that the patient do not breathe in the hot dry air, that theſe bodies emit; and no more covering will be required, than the perſon had been uſed to in health, except that another blanket may be laid from the thighs downwards; but profuſe ſweats ought not to be promoted. The ſteams of warm water ſhould often be drawn into the lungs; but the ſpout of the funnel which is uſed for this purpoſe, ought to be long and ſo bended, that the patient may receive the end of it between his lips, as he lies bolſtered up high in bed.

bed. Or a baſon of hot water, may conſtantly be held near his mouth and noſe; but as he will be made damp with the ſteams thereof, he muſt every now and then be wiped dry with a warm cloth. As proper a drink as any will be, warm water ſweetened a little with honey, having a little nitre diſſolved in it. This ſhould often be ſipped, but in ſmall quantities at a time, and rather warmer than on moſt other occaſions, that a plentiful vapour may paſs from it to the lungs along with the air in inſpiration, in order to relax the *veſſels* and attenuate the *viſcid humours*. And when we perceive theſe ends are anſwered, vinegar ought to be added both to the drink and the water which is uſed for ſteaming, with a view to excite a cough, that the lungs may clear themſelves of the extravaſated *mucus*. Indeed it may ſometimes be neceſſary, to add the ſpirit of *ſal ammoniacum* to the water inſtead of vinegar, as being a briſker *ſtimulus*.

For whether it be, that the *pneumonick nerves* are rendered leſs ſenſible by the compreſſions which the over-diſtended blood-veſſels make on them, or that the functions of the *common ſenſory* itſelf are impaired by the preſſure which the overcharged arteries make on the origins of the nerves in the brain, ſo it ſometimes is, that they are not ſenſible of ſlight impreſſions on ſuch occaſions. For the veins cannot return the whole of the fluids that are now ſent thither; neither can the lungs nor heart receive them freely from the ſuperior parts, which therefore muſt become more or leſs overcharged.

When breathing is much obſtructed by an acute pain in the ſide in a pleuriſy, which prevents a full inſpiration, the patient having already been bled and purged, three or four drachms of *poppy-heads*,

heads, two drachms of *juice* of liquorice, and an ounce either of *aniſe* or *fennel* ſeeds, muſt be boiled with three pints of water, till ſomewhat more than one third part of it is waſted. The liquor being preſſed out, two or three drachms of *nitre*, of *honey* and *wine-vinegar* each about one ounce and an half, and of *eſſence* of *antimony* from forty to eighty drops ſhould be added to make an *apozem*, of which two or three common ſpoonfuls muſt be given every half hour warm, till the pain abates, and reſpiration is performed with more eaſe; for it is owing to an impediment of *this* ſort, that a *peripneumony* enſues, when the *pleura* only was originally affected, as I believe is moſtly the caſe at firſt, whatever obſtructions and inflammation may afterwards appear on diſſection; for *this* only ſhews the ſtate of the interiour parts at the time of death, or rather when the diſſection was performed, than during the progreſs of the diſeaſe. For ſo long as the veſſels contain any degree of contractility, they will repel the fluids yet more, upon the *interiour* and *ſuperiour* parts.

In this obſtruction of expectoration, opiates given in ſmall doſes, repeated at proper intervals of time, are the beſt *antiſpaſmodicks*. But if the poppies induce an inſenſibility of pain, but without any abatement in the other ſymptoms; or if a drowſineſs comes on, another *apozem* muſt be made without *that* ingredient, to be given till the effects of the former are over; and afterward, leſs of the *poppy* muſt be uſed, or perhaps none will be required.

Inſtead of *nitre*, I ſometimes add from four to ſix drachms of unwaſhed *ſal polychreſtum* to the apozem. But, notwithſtanding the opiate, theſe ſalts together with the *honey* and *vinegar*, often purge the patient; for which reaſon, whatever is moſt

moſt likely to bring about or continue that effect, muſt be laid aſide. It ought alſo to be obſerved, that as the pain in the *peripneumony* is not ſo great as in a *pleuriſy*, no more of the *poppy* ſhould be uſed, than what may be barely neceſſary, to aſſiſt in removing the *ſpaſmodick* condition of the veſſels and other *muſcular membranes*. When poppy heads are wanting, about twenty or twenty-five drops of laudanum may be added to the decoction, or a grain and an half of opium may be boiled with the other ingredients.

Bliſtering between the ſhoulders, the breaſt and inſides of the arms above the elbows, has done good ſervice when the pulſe began to falter from a ſtoppage of the expectoration in the above diſorders. But I have little dependance on *gum ammoniacum*, *ſenna*, *ſquills* or ſuch things as are ſpecifically called attenuants, from a notion, that by reaſon of their active qualities, they thin the viſcid phlegm, and thus prepare it for being brought up eaſier. It is my opinion, however, that *this* effect is not in the power of ſuch medicines, which act on the ſolids rather than the fluids; and, conſequently they promote *vomitings* or *looſe ſtools*. Such acrid things indeed are of ſervice, when the *trachea* and *bronchia* are ſtuffed with *mucus*; for by irritating the *fauces* and *larynx*, they provoke coughing, whereby theſe parts may be freed, for the preſent, of the extravaſated humours. But the taſte or even the ſmell of any thing that is *volatile* or *ſtimulating*, will do the ſame. It is true, the above medicines from their heat and acrimony, may prove *diaphoreticks*, by ſtimulating the internal veſſels, ſo as to render their contractions briſker; whence a more equal diſtribution of the blood may be brought about. But in this reſpect they are only on a footing with many other productions of the like

like qualities, though without poſſeſſing any particular virtues againſt the diſeaſes we ſpeak of; nor even in a *catarrhal peripneumony* or a *pituitous aſthma*, ſaving that they provoke coughing, and that the *ſquills* excite vomiting; but any gentle emetick which operates quickly, will anſwer the ſame ends. However all ſuch medicines as heat and much increaſe the action of the veſſels, ought to be cautiouſly uſed at this ſtage of an *inflammatory peripneumony*. Inſtead of which *thoſe* that ſtimulate but gently and abate the exceſs of contractility in the ſolids, together with ſuch things as dilute the fluids are moſtly required.

The medicines I have particularly in view to anſwer the above purpoſe, are preparations of *antimony*, which, if given diſcreetly and without ruffling the patient, act on the veſſels within in a mild manner, and thus cauſe them to *vibrate* more forcibly, whereby they will be enabled to free themſelves of the *plethora* they now ſuſtain. For on theſe and many other occaſions, the internal arteries are in a highly *atonick* condition, owing to the blood being ſo accumulated in them, that they cannot complete their ſyſtoles. *A dreadful condition this*, when at the ſame time the vital motions are ſinking every moment, and the ſpaſm alſo is gaining fatt on the veſſels, by which thoſe within, including the heart and nervous ſyſtem, are overpowered to a ſtill greater degree. It may therefore be ſaid without exaggeration that thoſe fluids, which during the whole progreſs of our exiſtence, nouriſhed and ſupported us in the enjoyment of all our faculties, ſo long as the ſeveral parts acted in harmony with each other, ſhall at laſt ſuffocate and put an end to the lives of all men, who die of diſeaſes.

I have

I have mentioned the methods, which ſometimes have been ſucceſsful with me, when the ſpitting was ſtopped in diſeaſes of the lungs. But as every check of this ſort ſhould always be conſidered as of dangerous tendency, ſomewhat elſe muſt be attempted, if our expectations are not preſently anwered by the above remedies; nor ſhould I adviſe any one to deliberate long before he makes a trial of others. At ſuch times, likewiſe, we ought to apprize the relations of the danger, leſt they be diſappointed and ourſelves cenſured, as I and others have been, who from the falſe appearances of a ſoft and it may be a ſlower pulſe, and an abatement in the painful ſymptoms, prognoſticated the patient's recovery, whilſt at the ſame time his death was near; a cold clammineſs being already perceived on the backs of the hands, the toes and feet having alſo loſt their heat; which, together with a quick and laborious reſpiration towards the cloſe of *acute* and indeed *chronical* diſeaſes, are certain preſages of approaching mortality.

Before the diſorder had proceeded thus far, I ſometimes have relieved the patient, by giving one grain of kermes mineral every hour, in a bolus with five or ſix grains of theriaca, to prevent its running of by the inteſtines. Or a mixture was made with one or two grains of emetick tartar, half a drachm of theriaca, and ſix ounces of water, of which one or two common ſpoonfuls were given as above. Theſe are powerful *antiſpaſmodicks* in ſuch caſes; and ſhould they promote one or two vomits it might be better, provided the patient can bear ſuch ſhocks. Beſides, whilſt this courſe is purſuing, we ought to be diligent in the uſe of warm ſteams and drinks.

Of the Catarrhal Peripneumony or Peripneumonia Notha.

NO one diſtemper is likely to deceive the patient or an unwary phyſician more than the *catarrhal peripneumony*, by the fallacious moderation of its firſt ſymptoms, and the ſlow approaches it often makes; whilſt under the mildeſt appearances, a fatal diſeaſe is forming. The earlieſt warnings of it ſhould be carefully regarded, more eſpecially when they happen in groſs elderly people; ſuch lax ſubjects being moſt liable to it. Nor do I perceive much difference between this diſorder in aged perſons, and the ſuffocating catarrh in children, except, that in the former caſe the blood is more gradually accumulated in the lungs; and the ſick either die or recover ſooner of the latter; owing perhaps to the difference of conſtitution, which in young ſubjects is very irritable and conſequently more ſuſceptible of *morbifick* impreſſions, rather than that there is any ſpecifick diſtinction in the two diſeaſes.

Though the pulſe may not be much quickened, or it may be rather ſlow at the beginning of the *peripneumonia notha*, it will be ſmall and ſoft; and the hands, but more eſpecially the feet, ſhall have little warmth. But, according as the heat recedes from the extreme parts, it accumulates about the breaſt and forehead, and a ſtrong throbbing will be perceived in the *carotid arteries*, the *jugular veins* likewiſe appearing very full. The patient is helpleſs as it were from the firſt; and complains of a general laſſitude and weakneſs, together with a *torpor* both of the body and mind; and though his eyes are dull, and the countenance ſhall have a dejected

dejected and drowſy appearance, he will yet be reſtleſs; his ſhort ſlumbers being attended both with a ſtifling and terrifying dreams. A painful heavineſs in the head is perceived, and a weighty fulneſs about the breaſt which cauſes a difficulty in breathing; from which he endeavours to free himſelf, either by yawning, making a long inſpiration, fetching a deep ſigh, or by coughing; but little or nothing is diſcharged by the latter effort, though the lungs ſeem to be overcharged with *mucus*.

If the diſorder cannot be removed in this firſt period, the pulſe becomes more quick, although it ſeldom is ſo frequent as in other fevers, till the patient is almoſt at the laſt gaſp; nor is the heat ſo great, except in the forehead and about the breaſt. All the other ſymptoms are now heightened; more eſpecially the head-ache, which is much aggravated by coughing; and thoſe efforts are alſo more frequent than before, owing to the ſecretions being increaſed in the lungs and ramifications of the *aſpera arteria*. At the time of coughing, and for a ſhort while after, either a *tinnitus aurium*, or a buzzing noiſe is heard. Some patients alſo perceive as it were flaſhes of fire darting from their eyes when they cough; and the head then ſeems ready to ſplit in pieces. The face is ſometimes flushed and again pale; the veſſels in the eyes are much diſtended, and the *temporal* and *carotid* arteries beat ſtrongly. In breathing a rattling is heard in the lungs, an alarming ſtifling is perceived, which indeed abates a little after ſpitting; but the relief is of very ſhort duration; for a ſtill greater oppreſſion preſently enſues; nor will the patient be able to exert the ſame ſtrength long to to clear himſelf of the ſuperabundant phlegm; ſo profuſely and quickly is it ſecreted. And in

proportion

proportion as the *branchia* and *veſicles* fill with this *mucus*, which prevents the acceſſion of air to expand the lungs fully, ſo do the vital actions ſink; for the blood accumulates accordingly in the *brain*, *cerebellum*, *lungs*, and large veſſels near the heart. Reſpiration is now exceedingly difficult, the patient being anxious in the higheſt degree; for the reſpiratory paſſages are ſo clogged, that the entrance of air is almoſt precluded. A clammy coldneſs appears on the backs of the hands, and the lower extremities alſo loſe their heat; ſo that theſe ſymptoms taken all together, may juſtly be eſteemed the ſpeedy forerunners of death. The belly is generally bound for ſome days before this diſeaſe; and it continues ſo afterwards; the tongue for the moſt part being pale and ſlimy throughout the complaint.

The method I propoſed in another eſſay for curing pleuriſies, *&c.* will alſo remove the *catarrhal peripneumony* in its early ſtage, as I have ſometimes experienced; but ſtill, the belly ought to be kept moderately looſe; and when the complaint abates, the patient ſhould lie in bed for two or three days, having hot bricks laid at a proper diſtance from the outſide of each ankle, if thoſe parts have not a good warmth. Yet, however ſoon the diſorder may be checked, a cough and ſpitting will ſucceed; and when the humour that is diſcharged this way, becomes thin and clear, a decoction of *Peruvian bark* made with water, together with *eſſence* of *antimony*, ſpirit of *ſal ammoniacum* and *chemical oils*, ſhould be given to brace the conſtitution; the *pulmonary* and *bronchial* veſſels in particular, being now in a very *atonick* ſtate; and indeed the whole ſyſtem much relaxed. But *manna* or a little *ſal catharticum* ought to be added to the above medicine in caſe of coſtiveneſs.

In the ſecond period of this ſort of *peripneumony*, the belly ſtill ought to be rather looſe, and a good warmth ſupported in the lower extremities, in order to maintain a freer circulation there, by which means the unnatural flow of the fluids will be ſomewhat diverted from the ſuperior parts. The patient likewiſe ſhould breathe in the ſteams of warm water and vinegar, or of the latter alone; or inſtead of vinegar, when the *bronchia* are much ſtuffed, a ſmall quantity of ſpirit of *ſal ammoniacum* may be mixt with the water. In this ſtate of the diſeaſe, ſuch *antiphlogiſticks* as lower the vital actions, muſt carefully be avoided. And though unwaſhed *ſal polychreſtum* may ſometimes be given to advantage, yet plain *nitre* can ſcarcely be adminiſtered with ſafety, even in the ſmalleſt quantity. *Squills*, *muſtard-whey*, and ſuch other acrid and ſtimulating medicines, as were not recommended in ſpeaking of the true *pleuriſy* and *peripneumony*, may now have good effects. *Camphor* alſo and *volatiles* may be given in pretty large doſes every hour, more eſpecially when the patient is much oppreſſed and ſtupid withal. And were half a grain or a whole one of *kermes mineral* added to each doſe of the above medicines, the effect might ſtill be greater; for the *nervous* ſyſtem is ſo little ſenſible of impreſſions on theſe occaſions, that the patient can bear, nay he will require ſuch things as are of the moſt exciting and active principles; even half a grain of cantharides may ſafely be taken every hour; nor ſhould it be forgotten that bliſters muſt be applied ſucceſſively to one part after another, and *ſinapiſms* alſo to the feet and other places, if repetitions of ſuch applications are found to be neceſſary.

And becauſe the deſign is to promote rather than allay a cough, during the preſent *torpor* of the nervous

nervous ſyſtem, whatever medicines are uſed, ought to be ſo contrived, that a ſmall doſe of them may be given often, more eſpecially when the *trachea* and *bronchia* are much obſtructed with phlegm. However, I would not here be underſtood with reſpect to the above very active remedies, (it being ſufficient that they are given at the diſtance of one hour from each other and made in boluſes) but of ſuch other ſtimulants as are adminiſtered in a liquid form, whether by way of *medicine*, *nouriſhment* or *drink*; the two latter of which ought to correſpond with the general intention; and therefore, they ſhould be *cordial* and *ſpicy*, in order to ſupport the vital actions, and promote a more equal circulation of the blood; though alas! we ſhall be too often diſappointed in theſe hopes.

The liquid compoſitions referred to above, may conſiſt of decoctions of *horſe-radiſh*, *ſaſafras*, *winter's bark*, *ſquills*, *ſerpentaria*, *ſeneca*, *muſtardſeed*, *garlick*, *&c.* made with water, to which either ſalt or ſpirit of hartſhorn, or that of *ſal ammoniacum*, and tincture of *cantharides* ſhould afterwards be added. However, I do not mean that all the above articles ought to be boiled together or in equal proportions; for much leſs of the ſquills will ſuffice, than of any of the others; ſo that two or three of theſe ingredients or any thing elſe that poſſeſſes the like ſtimulating virtues will anſwer the ſame end. For example, ℞ Cort. winterani ſerpentar. ā ʒß rad. ſcillæ ℈ij vel ℈iij coq. cum aq. ad ʒviij. coletur & adde ſal. vol. c. c. ℈ij (vel ſp. ſal ammoniac. gt. LXXX) tinct. canthárid. (prius in hoc opere deſcrip.) gt. LXXX, eſſen. antimon. gt. LX ſach. ʒj, fiat miſtura cujus detur coch. j omni quadrante horæ. The nouriſhment may be broth made with lean meat, in which *ſpices*, *eſchallotes* and *aromatick herbs* have been boiled; panado or gruel

with about a ſixth part of *Madeira wine*, or a little *brandy*, having a good deal of grated *nutmeg* mixt with it. And for drink, *wine* or *muſtard-whey*; and tea made with *ſaſafras*, *mint*, *ſage* or *roſemary*, may be given in their turns, having twenty or more drops of ſpirit of hartſhorn added to them now and then.

However contrary it might be to reaſon and my own experience, I ſeldom forſake ſuch patients ſo long as they are able to ſwallow. So that, I have often fatigued myſelf and others, and likewiſe diſquieted the ſick in the laſt ſtage of this diſtemper, by endeavouring, if poſſible, to rouze the lungs to action, with very irritating ſteams, in hopes *theſe* organs might even now free themſelves by exciting a cough. And with the like vain expectations, general frictions were made, in order to keep the fluids in motion, and incite the veſſels to action, that the circulation might be continued, or rather renewed if poſſible. The moſt powerful ſtimulants alſo were given in large doſes, with the like views; but without any advantage at all. Nor do I know any means, by which life can now be prolonged for the ſpace of one moment of time; for every inſtant, the blood becomes ſtill more collected in the lungs and large veſſels near the heart, as well as in thoſe of the *brain* and *cerebellum*; the extreme ones being already ſhut up never more to be made paſſable to the fluids. The ſecretions into the *bronchia* and *veſicles* being at the ſame time ſo exceſſively profuſe, that the entrance of air into the organs of reſpiration, muſt preſently be prevented.

Some authors have ſuppoſed, that *this* ſuperabundance of phlegm, took place before the diſeaſe. And becauſe the diſorder ſometimes attacks in the ſpring, therefore, according to their reaſoning,

ing, ſuch an exuberant *mucoſity*, muſt have been generated during the preceding winter. But where it exiſted whilſt the patient enjoyed health, or till he was ſeized with this *peripneumony*, they have not told us, with any degree of probability. If it reſided in the fluids, as *they* pretend, there are palpable reaſons againſt that conceit. For had *theſe* contained ſo much of this *glairy matter*, as oftentimes is diſcharged by expectoration, in the ſpace of fourteen or more days, the blood, ſurely, muſt have been unfit to paſs the ſmall canals. But, this diſtemper really is moſt common with us in the autumn or at the beginning of winter, and before the humours have acquired any high degree either of inflammatory denſity, or of *viſcid inertneſs*; the latter of which they alledge is the cauſe of the *catarrhous peripneumony*. However, it is not to be thought, that the phlegm which is expectorated at ſuch times, was ſo viſcous and ropy when firſt ſecreted, as when it is diſcharged by expectoration. For being *then* of a much thicker conſiſtence than the blood itſelf, the *latter* would eſcape the veſſels rather than the former; which I never obſerved, at leaſt in any conſiderable quantity. We ought therefore to ſuppoſe, that *this* humour, thick as it may be, conſiſts only of ſerum mixt with coagulable lymph, which was rendered more glutinous by having been ſtopped for ſome time in the ſecreting organs, and which became ſtill more ſo after it was extravaſated, from the great heat of the place it lay in, together with the abſorption and diffiation of its thinner parts, which paſſed along with the air in expiration. Yet, whatever might have been the condition of the fluids previous to this diſeaſe, I cannot perceive any difference between the humours that are diſcharged by ſpitting during its courſe, and *thoſe* which paſs the ſame

way in a *catarrhal conſumption*; or even when patients are thought to expectorate properly in true *pleuriſies* and *peripneumonies*; though ſuch a *mucoſity* in the fluids is ſeldom or never ſuſpected, for being either the remote or immediate cauſes of the two latter diſorders.

Of the SPURIOUS PLEURISY.

WHEN a *rheumatiſm* affects the *intercoſtal muſcles*, the diſorder is called a *ſpurious pleuriſy*. In this diſeaſe the patient cannot lie on the affected ſide; and any preſſure made on the part, will aggravate the pain. The fever ſeldom is high at firſt, though the pain may be ſo acute, as ſometimes to bring on a *peripneumony*, by impeding reſpiration; whence the blood is made to accumulate in the lungs. If relief is ſought at the beginning, the complaint will ſoon yield to bleeding, (ſo the patient be ſtrong) purging and ſweating, and bliſtering the part; or inflaming it with poultices made with powdered muſtard and water may have the ſame effect. When the pain is troubleſome rather than violent, it will ſometimes be removed by bathing the place with a mixture, made with brandy, ſpirit of *ſal ammoniacum* and opium; covering it afterwards with a flannel wrung hot out of the ſame ſpirit, and laying a warm tile over *this* to continue the heat. Even the latter alone often abates it, by removing the local ſtricture which acts on the veſſels, and cauſes the obſtruction that is made to the progreſs of the fluids in them. Or a plaſter made with galbanum, camphor and opium, will nearly anſwer the ſame end; but the patient ought carefully to guard himſelf againſt catching cold.

Of

Of Catarrhal Fevers.

THOUGH the ſymptoms ſometimes run pretty high in *catarrhal fevers*, theſe diſorders ſeldom prove mortal, ſo they be properly managed. In general, the head ſuffers ſeverely, and more ſo when the patient coughs, and is coſtive withal. At firſt the cough is tickling and dry, and moſt troubleſome from the evening till towards the morning; when both *that* and the fever generally abate; and they may continue thus moderate, till three or four o'clock in the afternoon; when the ſymptoms increaſe. During theſe *remiſſions*, a crude thin ſpittle is diſcharged by coughing for a few days; but it gradually becomes thicker, of a better conſiſtence, is more plentiful, and comes away with leſs coughing; whereby the patient will be relieved of an oppreſſion at the breaſt, and alſo of a ſoreneſs he perceived along the courſe of the *trachea*; owing to a ſlight inflammation or too great a repletion in the glands of that part. The belly for the moſt part is bound in this fever; and the ſick are often delirious, more eſpecially during ſleep, which is always diſturbed with terrifying dreams.

In young vigorous ſubjects, ſome blood ought to be taken away; and in other reſpects, the cure depends on much the ſame ſort of treatment, that was recommended in another eſſay for removing inflammatory fevers in their early ſtages; but it will be neceſſary here, to bliſter the head, temples or behind the ears; in order to abate a head-ache which greatly diſtreſſes the patient. However, if the diſeaſe cannot be removed at this time, an expectoration ought to be promoted as ſpeedily as poſſible, in order to clear the veſſels in the *trachea*

and *lungs*, of whatever overfulneſs or obſtruction, may have taken place in them. But, as the cough ſhould be mitigated, rather than excited, till the veſſels begin to relax, ſo as to allow freer ſecretions to be made from them, warm water alone will be the moſt proper ſteam; for nothing that is irritating ſhould be uſed too early in this complaint. Therefore, inſtead of adding vinegar to whatever medicine the patient takes, about one drachm of the beſt olive oil, diſſolved with a ſuitable quantity of *mucilage* of *gum Arabick*, ſhould be mixt with a pint of the decoction of *figs*, *liquorice* or *barley* made with water; of which a ſmall cupful muſt often be given blood warm. The chief deſign of the *oil* and *gum*, is to guard the *larynx* from the irritation of a thin and perhaps, ſomewhat acrid humour, which either is ſecreted in the part itſelf, or falls on it from the contiguous ones; by which the cough is promoted. It is, indeed, true, that the fluids which for ſome time have been obſtructed and remained in an inactive ſtate in the veſſels, may have acquired ſome degree either of *acrimony*, *tenacity*, or *both*; or they may act otherwiſe as a ſtimulus, and ſo cauſe a cough. But after the ſecretions have become more free and theſe extraneous humours, no longer appertain to the circulating fluids, they ought then to be ejected. But *this cough*, neither can nor ought it to be wholly allayed, even were it in our power to do ſo; till the obſtructing humours are diſcharged, the circulation hath become free and equal, not only in the parts that are more immediately affected, but likewiſe in the whole ſyſtem; and the ſeveral ſecretions and excretions proceed in their natural order. Wherefore, we muſt for the preſent, be content with moderating *that* vexatious ſymptom, till the other points are gained. The too great

flow

flow of the fluids towards the ſuperior parts, muſt be diverted by the means that repeatedly have been mentioned; whilſt warm drinks and ſteams are often uſed, in order to relax the veſſels and dilute the humours in the reſpiratory paſſages, that they may be made more fit for circulation, as well as for being ſecreted freely, ſo long as this may be neceſſary.

In *this* fever, poppies cannot be given with any other view, than as an *antiſpaſmodick*, to abate the irritability of the *nervous ſyſtem*, and remove the conſtriction that acts on the veſſels and other muſcular membranes. Therefore, one drachm of *poppy-heads* may be boiled in water, with one or more of the above ingredients for a pint of decoction; but ſhould even this ſmall quantity confuſe the head more, or increaſe the *ſtupor* and pain in that part, the opiate muſt be wholly laid aſide.

Of the Catarrhal Consumption.

IF the cough that attended the above fever ſtill continues in younger ſubjects; or ſhould a *hoarſeneſs* or ſome degree of *oppreſſion* in the lungs come on at this ſeaſon in an adult, and the patient expoſes himſelf abroad without any care, after the expectoration (which neceſſarily muſt enſue in all ſuch caſes) had cleared the glands of the *trachea*, *bronchia* and *lungs*, of the humours that were unnaturally accumulated in them; or ſhould a cough be contracted at this time, or even later, and it does not ceaſe early in the enſuing ſummer, in all the above caſes the ſpitting then becomes more plentiful, and as it ſtill continues to increaſe in quantity, the patient moſt commonly dies the following

lowing winter. For the irritability of the nerves increaſing, and the ducts of the *ſecreting* and *excreting glands* in the *aſpera arteria* and its connexions being by this time greatly relaxed and daily dilating ſtill more, they permit their contents to eſcape in a profuſe manner; and *theſe* being poured into the *trachea* and *bronchia*, act as an extraneous *ſtimulus*, exciting coughs to diſcharge the parts of them.

With us, people are moſt liable to this complaint, between the ſixteenth and fortieth years of their ages; though it more frequently happens after they are turned of twenty. And it may be ſaid with truth, that is moſt generally, if not always brought on by their own imprudence, and a want of timely care.

This may properly be called the conſumption of *Carolina*; for that ſort which happens from a *vomica*, or an *apoſthemation* is more rare with us; whereas the *catarral phthiſis* is frequent, and proves equally mortal with the other, if it be not removed before the ſpittle becomes either ſalt or ſweet; for then, ſo far as I have yet ſeen, a cure is more difficult, or rather it ſeldom can be obtained. And when it is verging towards the fatal period, fevers either of the quotidian or continued ſorts, profuſe ſweats, ſerous diarrhœas, and œdematous ſwellings of the legs and feet enſue, as in the *phthiſis pulmonalis*. This fever, by gradually undermining the conſtitution, and paving the way, as it were, to the other ſubſequent ſymptoms, precipitates the danger, and ſhortens the patient's life; for at laſt it becomes of the putrid kind.

During the progreſs of this diſeaſe, the patient may have little or no pain or fever; and though the appetite, ſometimes, does not fail much, yet his fleſh and ſtrength waſte daily; but ſo gradually, that

that he is not ſenſible of their decay from day to day; ſo that he goes abroad as uſual, be the weather what it will; living likewiſe at large in other reſpects ſo long as he is able; and at laſt ſeeks relief when it may be too late. This is frequently the caſe; though a few days of confinement to his room, together with the uſe of warm drinks, might at firſt have prevented all the evils that followed, and prolonged his life perhaps for many years. I repeat it, that this diſeaſe is curable before the humours have undergone the changes we ſpoke of; for *theſe* ſhew, too great a laxneſs in the ſolids, and great diſſolution in the fluids; the ſaltneſs of them denoting a redundant *ammoniacal acrimony*; as the ſweet taſte does, thatthe *chyle* eſcapes the weak and exceſſively dilated veſſels in the lungs and paſſages leading thereto.

By bracing the ſolids, and conſequently, bringing about a better conſiſtence and more equal diſtribution of the blood, I have ſo far relieved ſeveral patients, even after the above ſigns of a confirmed *conſumption* appeared, as might almoſt be deemed a recovery. For they regained ſo much ſtrength and firmneſs of conſtitution, as to be able to follow their occupations; though ever afterwards, they were liable to coughs on catching a little cold, or when the weather was changeable. Theſe good effects were obtained by giving the *Peruvian* and *oak bark* made in decoction with water, of which two or three common ſpoonfuls were given every ſecond hour, having either half a grain of *Roman vitriol* or ſix grains of *alum*, or ſo much acid ſpirit of vitriol added to each doſe as properly acidulated it; and ten or twelve grains of new filings of iron, were alſo ſwallowed every third hour. When the ſtomach loathed the decoction, ſix ſpoonfuls of *it* were injected by way of clyſter

every

every third or fourth hour, but the *foſſil ſalts* and *chalybeate* were at the ſame time adminiſtered in boluſes; or the latter may be given by itſelf, and the mineral acid added to the clyſters, but in a greater quantity, than if it were to be ſwallowed; experience teaching us, that the large inteſtines are not ſo acutely ſenſible of impreſſions made by *ſtimuli*, as the ſtomach and ſmall guts are. In the mean time, the diet ought to be of the drier ſort; as tender lean meat either roaſted or broiled; and if broth is deſired, it ſhould br warmly ſeaſoned with *ſpices*, *onions*, *&c.* but cleared of all fat; fiſh whether of the *cruſtaceous* or *ſcaly kind*, provided they be not oily; and biſcuit is preferable to leavened bread. But whatever the food may be, it ſhould be taken in ſmall quantities and frequently, rather than ſeldom and by much at a time; and, at leaſt a pint or more, either of ſound claret or red Port wine may be allowed in the day to an adult, if ſuch liquors do not diſagree with him.

I alſo greatly depend on conveying the ſteams of *tonick* medicines, directly to the lungs. For which purpoſe, a ſtrong decoction of Peruvian and oak bark, moderately impregnated with the acid or rather the dulcified ſpirit of vitriol, may be applied often. But as dry ſteams, ſaturated with *balſamick* and *antiſeptick* particles, ſeem now to have the preference of thoſe which convey watery exhalations to the lungs, powders may be prepared with *gum elemi*, *thus*, *balſamum tolutanum*, *&c.* which ſhould often be thrown on an iron ſo heated, as to raiſe a fume, but without any blaze; at ſome diſtance from which, the patient ought ſo to place himſelf, as to receive *this* vapour, in a moderate manner, into his lungs.

A redundance of an *ammoniacal* acrimony, has been ſaid to prevail in ſome caſes; which certainly ought

ought to warn us againſt the uſe of direct *alkalies*, in order to avoid *that degree of volatility* being generated in the fluids, which would quickly become fatal to the patient by its putridity. Here, therefore, not only the *ſtyptick mineral acids*, but the vegetable auſtere and ſpirituous ones, as claret, and the red wine of Oporto, are eminently uſeful; and *theſe* ought therefore to be freely drank; but ſtill without inducing intoxication.

Though even in its very advanced ſtage, the *catarrhal conſumption* may not be attended with much fever, till towards its fatal periods, when the patients no longer have the ſtrength to clear themſelves immediately by coughing of the ſuperabundant *mucus*, that is ſecreted into the *bronchia*. Yet, during the ſummer, or whenever the weather becomes continuedly warm, a fever of the quotidian ſort, ſhall attack *them* in the afternoon, who yet are not in very deſperate circumſtances. But *they*, on whom the diſeaſe has made a ſtill greater progreſs, ſhall have continued fevers, though with ſmall abatements towards the morning, and for ſome hours in the forenoon, (more eſpecially if the cough had been moderated in the night by opiates) but ſtill without a diſtinct intermiſſion. However, notwithſtanding ſuch high degrees of fever, the patients are not ſenſible of head-ache, ſickneſs at the ſtomach, or any other diſtreſſing ſymptom, except a greater heat and more hurried reſpiration. For, the conſtant diſcharge of thoſe fluids which once had been *animalized*, (however imperfectly) the courſe of the humours being now chiefly directed towards the lungs, prevents any unnatural accumulation of the fluids taking place in any other ſeries of veſſels. Yet, though others in different circumſtances, would be greatly diſtreſſed by the violence of ſuch a fever, theſe conſumptive patients

tients continue eaſy in all other reſpects, excepting thoſe we ſpoke of.

I wiſh it were in my power, to preſcribe a certainly curative courſe for perſons in this condition; but hitherto I have been diſappointed, and muſt confeſs that if the methods already laid down, together with making a diſtinction, as to the quality of the matter that is excreted, does not avail, I yet know not what will. The cure of this diſeaſe, when it has proceeded to great lengths, is one of my *deſiderata* in phyſick, which I ſhall have a particular attention to, if God ſpares me. And ſhould future experience produce any thing ſatisfactory either to myſelf or mankind, they ſhall be made acquainted with it.

After all, when patients are reduced to the deſperate condition we mentioned, what avails it to deprive them ſo much the ſooner of the little ſtrength they ſtill enjoy, by recommending their undertaking voyages by ſea, or journeys by land, under a pretence of changing their climate? For, though it be certain, that in ſome degrees of this diſtemper, as well as in others, ſuch alterations of air may have good effects, when a right choice is made, I would aſk thoſe who preſcribe ſuch perigrinations, whether they can ſeriouſly expect patients of this ſort ſhould receive any advantage from ſuch travels, on whom the certain harbingers of death had already taken poſſeſſion. I have ſeen people in this condition, arrive here to paſs the ſummer, which proved quickly fatal to them; and therefore my opinion truly is, that on thoſe occaſions, ſuch counſel may with truth be accounted *ſplendidè mendax.* For it would be better, to ſuffer them to die in quiet with their relations, than to haſten their deaths amongſt ſtrangers, by making them

them undergo fatigues, which they in no wiſe are able to ſuſtain.

The medical courſe we mentioned, ought to be perſiſted in for ſeveral weeks, or ſo long as may be neceſſary; with this difference, however, that according as the patient gains ſtrength, the doſes may be given at ſomewhat longer diſtances of time from each other; but ſtill without relaxing too much in that reſpect. The perſon ought alſo to ride daily on horſeback, when his ſtrength and the weather will permit; and *this* exerciſe ſhould likewiſe be continued for a good while afterwards; as it not only contributes greatly to the preſent, but future eſtabliſhment of his health. And, conſidering how much the *reſpiratory* organs have been weakened, it will behove him to be careful how he expoſes himſelf to windy or wet weather; for next to the heart and brain *theſe* parts are of the moſt immediate conſequence to life. Beſides *this* great degree of relative *atonia*, the whole conſtitution has been much impaired; and, if poſſibly it can be avoided, the patient muſt determine for the time to come, never to be abroad in the night, nor too early in the morning, before the dews are exhaled, and the ſun has dried and warmed the air. After giving theſe cautions, it is almoſt needleſs to mention, that the perſon muſt never expoſe himſelf to the weather, when it is windy and wet.

When this diſtemper ariſes from a common cold, the ſpittle, at firſt, is thin, or of an unequal conſiſtence, and ſmall in quantity; but afterwards *it* becomes more plentiful, ſmooth and thick, and moſt commonly is of a pale yellow colour. The complaint might now be removed with a little care as has been ſaid; for whatever of overfulneſs or obſtruction happened, being effectually removed by this excretion, the veſſels would ſoon recover their

their tone and natural diameters. But, as the patient takes little or no thought about his condition, the *ſecretory* and *excretory ducts* of the *mucoſe glands* become ſtill more lax and dilated; the diſcharge being augmented accordingly. And this extravaſated ſerum, acting as a *ſtimulus*, cauſes a cough by its irritation, whereby to expel it.

It is plain, that as the *pulmonary ſecretions are now proceeding in an unnaturally profuſe manner*, the blood will be but little reſiſted, in flowing into the veſſels of the lungs, which are thus conſtantly diſcharging their contents; wherefore, the fluids will ruſh thither in a fuller ſtream than to other parts. And doubtleſs, ſhould the outer ſurface be conſtricted by cold or damp air, the humours will thereby be ſtill more repelled towards the *viſcera*; and conſequently every complaint in theſe parts, muſt thus be made worſe. Hence we plainly ſee the reaſon, why both the *cough* and *expectoration* ſhould continue; whereby the body is by degrees exhauſted of its juices.

When the ſpitting becomes plentiful, and as it were conſtant, the conſumption may be ſaid to have commenced; of which the patients ought to be admoniſhed, though the warning may perhaps be ſlighted. I know no medicine that deſerves the name of a pectoral, ſpecifically; for thoſe which are commonly ranged under *that* head, as well as all others, have only relative or conditional virtues, acting no otherwiſe to advantage, than as they happen to be ſo adapted to the preſent ſtate of the patient, that they ſhall either wholly or in part remove the diſorder. But the cure of the complaint we ſpeak of, depends on few remedies, which differ widely in their qualities, from thoſe that uſually are deemed expectorants. Theſe, as hath been ſaid, are ſuch as augment the *tonick* force

force of the ſolids, in order to prevent the preſent exceſſive local ſecretions; and they may be given in whatever form the perſon chuſes; though at the beginning of the courſe I prefer a decoction of them made with water, conſidering how unable the conſtitution may be at preſent; either to digeſt or apply medicines, if they are adminiſtered in a groſs manner. And becauſe it is of the utmoſt conſequence, that the lungs ſhould have ſome reſpite, from the violent exerciſe of coughing, a decoction of poppies ſhould be given in ſmall doſes in the evening and forepart of the night; till the cough is allayed, *it* being moſt troubleſome and dry at theſe times; or a ſuitable doſe of any other opiate given at once, will anſwer the ſame end, though it is beſt to give ſuch palliatives gradually till the troubleſome ſymptoms are abated. Or two or three drachms of poppy-heads may be boiled with the other ingredients, when the tonick decoction is made; ſuch *ſedatives* being highly neceſſary, to procure a temporary ceſſation from this obſtinate cough; the continued and violent exerciſe of which, by weakening the lungs ſtill more, increaſes the ſecretions, whereby together with the fatigue and want of reſt, the patient will ſo much the ſooner be deprived of his ſtrength. But as *opiates* will incline the perſon to coſtiveneſs, a common clyſter ought to be injected every other day, or whenever this may be required. If the weather be windy, wet or cold, the patient ſhould keep his chamber; but when it is temperate and fair, he ought to ride and with a quick pace too, if he can bear this jolting without promoting the cough, or fatiguing him. A dry and moderately cool air, is beſt ſuited to this diſeaſe; and therefore, a hilly or an elevated ſituation ſhould be choſen; but, if

this cannot conveniently be had, the perſon ought to lodge in an upper apartment.

It may appear ſurprizing to ſome people, how it ſhould be, that patients in this diſeaſe, ſhould ſtill loſe ground, notwithſtanding they make three meals a day, and uſe ſpirituous drinks, which altogether may amount to ten or twelve pounds weight in the ſpace of twenty-four hours; whereas, *they* do not, perhaps, diſcharge, more than two pounds by ſpitting within that ſpace of time. But, it ought to be conſidered, that the *ingeſta*, when of a ſalubrious quality, and they are received even in a freer manner than we mentioned above, by a perſon in health, ſeldom produce any diſeaſe; the ſeveral ſecreting organs, then performing their offices promptly, ſo as to free the body of ſuperfluities. But, the caſe is very different in the catarrhal complaint. For as all the other excretions, may proceed in a tolerably regular order, yet, this unnatural expectoration is ſuperadded. And, which is worſe, the excretions that are now made from the reſpiratory organs, are of *animalized* fluids, which ought to have contributed to the ſupport of the conſtitution, as they often conſiſt of *chylous* and *ferous* parts, as well as of *coagulable lymph*; the latter of which will appear, from the ſubſidence that happens when the patient ſpits in a baſon with water, though no ulcer takes place in the *trachea* or lungs. Beſides, as the power of the nervous ſyſtem, is by this time diminiſhed, digeſtion being alſo but partially performed, and the *vis applicans* likewiſe impaired, where is the wonder, if patients under theſe circumſtances, ſhould gradually loſe their ſtrength and fleſh, even though the ſpittle were only a mere mucus, and floats high on the water, as ſometimes is the caſe?

It ſeems to me pretty evident, that, in the laſt ſtage of this ſort of conſumption, the fever is of the low and ſomewhat putrid, rather than of the inflammatory kind; for the patients complain of no pain or other diſorders, but thoſe we have already mentioned. They alſo take nouriſhment freely, and retain whatever is received; being likewiſe of clear judgement and memory; for many of them have informed me, that excepting ſome degree of anxiety, they had no uneaſy ſenſations, even a few hours before death. Nay, ſo eaſily do they die to all appearances, that I have known many of theſe as well as others, who had been gradually exhauſted, go to ſleep for ever, with ſo little trouble either of mind or body, that though the pulſe could no longer be felt in the wriſt, and the hands and feet were already cold and livid, yet when a fly ſettled on any part of their faces, they would drive it away. So tranquil is the paſſage from life to death in many caſes; and beſides, moſt of thoſe ſubjects, retain all their faculties almoſt to the laſt gaſp. Indeed my opinion is, that *this king of terrours*, is but little dreaded by moſt people at that awful hour; the bitterneſs of death, being, as it were, paſt, when this final period is at hand. For the pain and ſickneſs which led to *this fatal cataſtrophe*, being now over, the patients ſtifle gradually, and at laſt become inſenſible to all afflicting impreſſions. True it is, that many perſons die, ſeemingly, in all the convulſive agonies which can diſtort the human frame. But then, we may reaſonably conclude, from what is frequently ſeen in *epilepticks* and other generally convulſed patients, who afterwards recover of ſuch exceſſive excitations of the *vis nervea*, but knew nothing at all of what happened to them, that the like inſenſibility

ſibility of pain, attends thoſe who die, even in this frightfully convulſed condition.

A perſon aſſured me, that he had cured himſelf and others of confirmed *catarrhal conſumptions* by drinking every third hour, a ſmall tea-cup full of vinegar, which was ſtrongly impregnated with the vitriol of iron. But this is both nauſeous and harſh; and poſſeſſes little other virtues, than the medicines I uſe; which, taken all together, ſeem more effectual than the *chalybeated vinegar*. His medicine is prepared by infuſing eight pounds of iron with one gallon of wine-vinegar, for the ſpace of ſeventy-two hours, in an unglazed earthen jar.

Of CORYZAS.

ON catching cold at this ſeaſon, infants in particular are liable to *coryzas*, in which, the *pituitary membranes* of the mouth and throat are thickened and overcharged; and ſometimes this reaches as far as the *glottis*, *Euſtachian tube*, *tympanum*, and even to the *frontal ſinuſes*; the ſerous humours being accumulated in them to ſuch a degree, that the voice is hoarſe, the patient's breathe in a ſnuffling manner, and with their mouths open, ſo that infants cannot ſuck nor even ſwallow freely; the ſenſes of ſmelling and taſting are loſt or much obſcured for the preſent; that of hearing is dull, and a tenſive pain in the head is perceived, with a general laſſitude. In caſes of this ſort, young ſubjects are in danger of *ſuffocating catarrhs*, or the *maxillary* and *parotid* glands may ſwell to an alarming degree, though the danger may not then be great, becauſe theſe tumours are ſeldom attended with many ſymptoms of a ſanguineous inflamma-

tion; the obſtructing humours conſiſting moſtly either of *mucid ſerum* or lymph. Should a fever commence under the above circumſtances, theſe ſwellings may either aſſume a more inflamed appearance, and alſo increaſe much in bulk; or ſuch pains will probably fall on the ſides, that children cannot endure to be moved without ſcreaming; and breathing alſo is much hurried, even whilſt they lie ſtill.

On the above occaſions, the patient is always diſpoſed to coſtiveneſs; and even were he not ſo, a diarrhœa ought to be promoted in the two former inſtances, and ſweating alſo ſhould be encouraged; but without overloading the patient with covering. Such diſcutient fomentations and poultices, as were recommended for thoſe vaſt ſerous enlargements of the *parotid* and *maxillary* glands called the *mumps*, ought likewiſe to be applied in the ſecond caſe.

But, though ſo frequent purging will not be required, when the diſorder terminates in a pleuriſy or peripneumony, yet evacutions of this ſort ſhould be briſkly promoted once, if not a ſecond time, in the firſt days of thoſe complaints; and, if poſſible, ſweats ought to be brought on during the operation of the cathartick, or as ſoon afterwards as may be; to which purpoſe a bed-pan ought to be uſed by adults, and hot bricks laid at a proper diſtance from their feet. But, if the fever together with the pain and cough ſtill continue, notwithſtanding the purging and ſweating, a decoction of figs, Spaniſh juice and fennel ſeeds ſhould be made with water, to two ounces of which when ſtrained, ſix or eight drops of eſſence of antimony, as many of the beſt olive oil diſſolved with a little extract of gum Arabick, and one drop of laudanum being added, a teaſpoonful of this mixture

muſt be given warm, every half hour to an infant of one year, till the moſt acute ſymptoms are abated. For as pain ſtimulates both the nervous and ſanguiferous ſyſtem, it ought as much as poſſible to be guarded againſt, more eſpecially in the diſeaſes of young children, whoſe delicate frames are exceedingly irritable, and remarkably ſuſceptible of irkſome impreſſions.

If the ſtools are curdled, pale and frothy, or of a greeniſh colour, either *magneſia* or *crabs-eyes* and rhubarb, ought to be interpoſed at times; for the belly ſhould not only be kept properly looſe in the fevers of ſucking children, but the firſt paſſages alſo, as free from a redundant *acidity* as poſſible, more eſpecially when their diſeaſes are of the acute ſort. In the *pleuritick* complaints of children, I order the nurſes to confine themſelves along with the patients in bed, (if they will not lie ſtill without them) till the danger be over; for without ſuch a caution, or if they are often taken up from under the covering, little advantage can be expected from the beſt adapted medicines.

Of the APOPLEXY.

OF all the diſeaſes to which man is liable, no one makes ſuch ravages as the *apoplexy*, whether we regard the numerous ſudden deaths it occaſions, or the permanent marks by which it may be traced, ſo long as the patient lives. For he who hath ſuſtained one of its ſlighteſt touches, ſeldom or never eſcapes with the ſame intireneſs of conſtitution he enjoyed before; for according as the functions of the brain may be more or leſs injured, either a *hemiplegia* or palſy of ſome particular

cular part, remains to be dragged along as a burthen to the others; and the *faculties* of the mind are alſo impaired in proportion; ſo that the whole man is no longer properly animated.

Thoſe who are liable to a *vertigo*, ſhould keep their heads cool and their feet warm, and lie with their heads raiſed high in bed. They ought alſo to be abſtemious in the uſe of ſpirituous liquors, and make moderate meals, more particularly at night; indeed it were better not to eat any ſupper at all, unleſs it be a little broth, and that early in the evening. They ſhould avoid noiſy company, and ſpeaking much themſelves, more eſpecially with a loud voice; elſe they will preſently become giddy, confuſed and forgetful of the ſubject. They ought not to expoſe themſelves long to the ſun, nor be much abroad when the ſeaſon is changeable, windy or damp, or when a froſt quickly ſucceeds warm weather. The ſame caution will alſo be neceſſary when a thaw happens, and the air from having been cold and clear, changes to warm and moiſt; for every ſudden and great exceſs either as to heat or cold in our atmoſphere is dangerous to ſuch people.

Except from intoxication with ſpirituous liquors, I never knew one perſon ſeized with an apoplexy, who was not aged, of a corpulent and lax, or otherwiſe weakly conſtitution. A large head and ſhort neck * undoubtely diſpoſe to this diſeaſe; more eſpecially in very irritable habits, as thoſe of ſuch a ſtructure oftentimes are; they likewiſe are more liable to hemorrhages from the noſe, than

* And for the like reaſons, youths of this ſtructure, are often haraſſed with terrifying dreams, dreams even in health, more eſpecially when they lie with their heads low; and in fevers, they are very liable to ſtupors and convulſions.

others who are of a different make. For, as the head, conſidering its bulk, receives a much greater quantity of blood than any other part that is more diſtant from the heart; and the arteries being not only large but very numerous within the ſkull, and their coats alſo thinner and leſs elaſtick than they are elſewhere; and having no aſſiſtance from the action of ſurrounding muſcles to puſh the blood forwards in them, the diſtance between the heart and brain being likewiſe ſhorter than in thoſe who have longer necks, it is not difficult to conceive, how eaſily they may admit and retain ſuch an overcharge under certain circumſtances, as may injure the nerves at their origins in people of the above claſs, from a greater preſſure and weight of the arterial blood, when it happens to be determined thither in too rapid and plentiful a ſtream.

This indeed is bad enough, though it is not the worſt that may happen: for ſhould the coats of the arteries give way to this *violent* protruſion of the fluids, and blood be effuſed upon the ſurface of or into the *ventricles* of the brain, the patient muſt die either ſooner or later, according to the quantity of this extravaſation, and the place it is made on. For, if the rupture happens in the veſſels of the *cerebellum*, death may inſtantly enſue, as the communication of the nerves with thoſe viſcera which ſupport the vital actions, muſt thereby be immediately intercepted.

Aged people are liable to many infirmities, which ought not always to be imputed to the great number of years they had ſeen; but more probably to the various diſorders they might have ſuffered in a long courſe of time, whereby their conſtitutions muſt be more impaired than otherwiſe they might have been. Moreover, the force of the heart being abated in them, and the circulation

ſlow in the extreme veſſels, *they* are in a remarkable manner ſubject to ſtrong ſpaſmodick conſtrictions of the external ſmall arteries and other muſcular membranes, which repel the fluids into the interiour veſſels, more eſpecially thoſe of the brain; which in ſuch ſubjects, may have been remarkably weakened, by the reiterated ſurcharges they had before ſuſtained at different times; whence the humours meeting with but little reſiſtance, they become irregularly collected in them, overdiſtending and conſequently weakening their contractile force, ſo that for the future, the *cerebral* arteries become ſtill more liable to *plethorick* affections from various cauſes. Nor are younger ſubjects exempted from the like effects, from ſimilar cauſes.

The like conſequences eventually enſue from a courſe of habitual drunkenneſs, owing to the veſſels being ſurcharged and overſtretched from day to day, with the great quantities of ſpirituous liquors which ſots guzzle; the fluids likewiſe being immoderately rarefied by the heating qualities of of ſuch ſtrong drinks, whereby the nervous and ſanguiferous ſyſtems, and in a particular manner the veſſels of the brain are proportionably injured. Accordingly, the head in many people continues greatly diſordered, for ſome days, after ſuch debauches. When, therefore, the veſſels are diſcharged of theſe temporary and repeated repletions, the unhappy ſubjects of this vice are truly *paralytick*, and unfit for any buſineſs that requires the full and free exerciſe of the mind or body; and their hands and feet are without warmth, till a briſker circulation is excited, and their faculties are as it were reanimated, by ſome draughts of their favourite liquor, which gives new life to ſuch men. Another conſequence of ſuch a continued courſe of inebriation is, that the veſſels in the brain

brain and *cerebellum*, are oftentimes ſo weakened and relaxed, by the repeated overdiſtentions they have been made to undergo, that the ſerous parts of the blood eſcape and become effuſed by degrees, either on the cortical ſubſtance or into the ventricles of the brain; whence a drowſineſs, *ſomnolency* or even a *lethargy* ſometimes enſue. Thoſe people are obſerved to be in a particular manner liable to *convulſions*, *lethargies* and *apoplexies*; owing probably to the weakneſs of the nervous ſyſtem, an exceſſive irritability of the ſolids and great laxity in the veſſels of the brain.

Old men and weakly people very generally are troubled with a redundance of acidity in the firſt paſſages; which, by irritating the coats of the alimentary canal or thoſe of the more diſtant ſanguiferous veſſels, after it has paſſed to the circulating fluids, induces a ſpaſm on the external arteries and other muſcular membranes. And *this* becoming more general by a ſympathy of parts, all the miſchievous conſequences that already have been recounted, may thence enſue. Should nothing worſe happen immediately from this ſharp humour conſtricting the outward ſmall veſſels, it will induce a coldneſs that will be moſt obſervable in the feet and hands, together with either a laſſitude or a numbneſs about the legs and thighs; and ſometimes a ſenſation as of ſmall *ants* crawling on the ſkin from the feet upwards, is perceived on theſe occaſions, as evidences of a ſpaſmodick conſtriction acting on the external membranous parts. At ſuch times likewiſe either a *tinnitus* or a buzzing in the ears, * giddineſs, or a temporary loſs of ſight,

* Theſe noiſes in the ears may indeed enſue from partial affections of the *auditory organs* independant on any general diſorder in the *nervous ſyſtem*. And accordingly in a *tinnitus* when

ſight, together with a ſickneſs at the ſtomach, are common; and frequently a vomiting of ſomewhat very ſour enſues and relieves the patient, who without *that* might then have been ſeized with *convulſions*, a *lethargy* or an *apoplexy*. At the intermediate times, when the patient is free of the above complaints, unleſs we, perhaps, except the noiſe in the ears, he will be liable to frequent *ſneezings* and *yawnings*, and feel a weighty ſort of fulneſs at the ſtomach, though without any ſickneſs or pain. But then, *this* will be accompanied with a kind of *torpor* both of the mind and body, which confounds his faculties and ſpeech; ſo that he will be ſhy of company or of appearing much abroad, as diſtruſting his own behaviour, or that he cannot walk without reeling; nor on theſe occaſions will he like to be ſtared at, as believing he is marked for having ſomewat ſingular about him; which notions add greatly to his confuſion and abſence of mind.

Thoſe who are liable to a giddineſs, cannot look downwards from a high place without dread, tho'

when *this* is thought to ariſe from a *ſpaſmodick condition of the tympanum*, or of the *auditory nerves*, emollient fomentations and poultices may be applied to that ſide of the head; and relaxing oils poured into the affected ear with advantage. On the contrary, as the dull hollow noiſe, ſuch as that of the ſea beating on the ſhore at a diſtance, ſeems to be owing to a too relaxed ſtate of the *tympanum* and membrane which lines the inſide of the ear, *ſpirituous*, *ſtimulating* and *tonick applications*, as well as electrical ſhocks given to the part, *are neceſſary*. In the former of theſe complaints, the cavity of the ear is generally dry and free of *cerumen*; but in the latter the ſecretions are too plentiful, ſo that the *cerumen* is overabundant. Thoſe local diſorders are often temporary, being troubleſome only at times, unleſs they had been neglected when firſt diſcovered; but when one or the other of them becomes habitual, they are of more ſerious conſequence, and for the moſt part their cauſes are to be ſought for elſewhere.

it were only from a window on a ſecond floor or a balcony; neither can they paſs a bridge (more eſpecially a narrow one) over a ſtream of running water, without fear of tumbling into it. Nay, ſeeing a perſon in any one ſituation which they think is dangerous, has the ſame effect. Even riding on horſeback, alarms them with the apprehenſion of falling, when they look at the various objects that preſent themſelves on each ſide of the way. For *theſe* ſeeming to paſs in a direction contrary to that in which the horſe advances, and with the ſame celerity, the *common ſenſory* is confounded and greatly diſordered by this appearance of fluctuation in ſo many different bodies; which to them ſeem to be conſtantly changing places. Before ſound ſleep and even afterwards throughout the night, they are liable to terrifying dreams and ſtartings, as if an *electrical* ſhock were given them on different parts of their bodies; more eſpecially thoſe above the waiſt; and indeed the ſenſation in ſuch caſes, is exactly the ſame, as *that* which *electricity* cauſes. They likewiſe ſometimes perceive, as if a ſmart blow were either given in the middle of the forehead, or they had ſtruck their heads againſt ſome hard body or other; and every ſudden and unexpected noiſe ſtartles and ſets them a trembling; cauſing a palpitation, with a hurried pulſe and reſpiration.

Such people are remarkably liable to cramps in the lower extremities: and, moreover, they in general are bad ſleepers. For ſetting aſide their being often diſturbed by alarming dreams, whenever they incline to compoſe themſelves to reſt, ſuch a ſucceſſion of whimſical ideas i trude on their minds, that they have not time to forget themſelves. For ſo unnaturally active is their imagination, that it will not allow them to ſleep; but

diverts

diverts them from it by bringing to their remembrance, ſuch incidents as had paſſed many years before, and how they ought then to have behaved on various occaſions; or in contriving ſome future airy ſcheme, which next day they think no more of; and are ſurprized how ſuch a medley of impertinent nonſenſe ſhould have obtruded itſelf on them. So frivolouſly may the *mind* of *man* be employed, when the ſeveral organs are diſconcerted, and rendered unfit to ſupport that free intercourſe which ought to ſubſiſt, between the *mental* and *bodily faculties*.

However, in ſuch a ſituation as the above, the *common ſenſory* being at laſt as it were fatigued, by ſuſtaining ſuch a fanciful mixture of ideas, *it* at laſt ceaſes to act as it were; ſo that the perſon then falls aſleep; though his repoſe will be but of ſhort continuance, and far from refreſhing. In this manner, the habit of ſleeping becomes more and more loſt, till the patient falls into a *typhomania*, and becomes either ſilent, or talks inceſſantly of being damned, or in ſome other deſponding way. This indeed is a piteous condition; and ſhews, almoſt the utmoſt degree of depreſſion in the *nervous ſyſtem*; which therefore, ought to be rouſed to a more general exertion of its power, by the perſon's making a free uſe of wine and other cordial drinks and nouriſhment; as well as by his being weaned from his gloomy ideas, by cheerful company and exerciſe at all times.

I have often done it myſelf, and adviſed others to guard againſt the intruſions of ſuch vague and incoherent ideas, and to fix the attention on ſome *one only*; on which let their minds ruminate, till the *ſenſory* being weary of this object, it at laſt retires from the former buſy ſcene, and compoſes

itſelf

itſelf to reſt, when the patient may enjoy ſome ſleep.

Such obſervations ſeem not to belong to the ſubject we at preſent treat of. But as ſome of thoſe ſymptoms, are common to them who incline to *apoplexies* and other convulſive diſorders, ſo *they* who are thus affected, oftentimes actually die in theſe ways; and for that reaſon a place was given them here.

As the circulation is naturally ſlow in the brain, the ſeveral ſymptoms mentioned above, ſeem to indicate too great a fulneſs in the veſſels there, and conſequently they muſt preſage danger, unleſs ſome lucky incidents, as purgings, vomitings, or both intervene to prevent *it* for this time. *This* then is the uncertain ſituation of *thoſe* whoſe *nerves* have become impreſſible by the ſlighteſt cauſes, and even by ſuch as would be agreeable and recreating to men, in whom the conſtitution was rightly diſpoſed.

The preceding ſymptoms plainly ſhew, an extreme irritability in the *nervous ſyſtem*, which at ſuch times, is principally affected. And as all diſorders of *this ſort* have a wonderful and often a ſpeedy effect on the *ſanguiferous* and *ſecretory veſſels*, more eſpecially when their power is inordinately excited, from whatever cauſe *this* can happen; as among many others, by the paſſions of the mind, in particular thoſe of fear and anger, *theſe* therefore ought as much as poſſible to be guarded againſt. But *this* may be extremely difficult; as ſuch people are generally very prone to both, eſpecially the latter. For on ſuch and other occaſions of violent *excitements* too great an influx of the animal ſpirits being made to thoſe nerves which are diſtributed to the coats of the blood-veſſels and other *continuous membranes*, *convulſive* or *ſpaſmodick conſtrictions*

conſtrictions are likely to enſue, particularly on the external ſmaller canals, as being moſt irritable. Hence the blood being impetuouſly impelled towards the *brain* and its *appendages*, either ruptures of the veſſels, or effuſions of the *ſerum* happen; according to the degree of which, immediate death, or a life of imbecility both of the body and mind follows, as already hath been ſaid.

The above *prognoſticks* of the *apoplexy*, as well as of other convulſive diſorders, have not been ſo much taken notice of as they deſerved. And, though all the ſymptoms of any one diſeaſe do not conſtantly occur in the ſame patient, yet, the above are here recounted together, as frequently happening, at different times, to the ſame perſon. And as ſubjects of this ſort, never fail in being more or leſs liable to an *acid acrimony*, this might be removed for the preſent, with *magneſia* or *crabs-eyes* given freely; the one or the other having the preference, according as the belly requires being looſened or otherwiſe. And in debilitated habits, *theſe alkalies* ſhould be mixt with a decoction of *Peruvian bark* made with water, and warmed with volatiles, aromatick oils or both; the patient perſiſting in the uſe of ſuch things for the ſpace of a week or more; the longer the better. A proper diet ſhould alſo be obſerved, not only during this courſe, but afterward; ſo far at leaſt, that the *aceſcent* be not too much gone into.

Such reſtraints methinks, ſtand in no need of the aids of *philoſophy* to induce a man's acquieſcence in them, who weighs the hazard of pleaſing his taſte, againſt the hopes of enjoying better health, or it may be of prolonging life with ſome comfort to himſelf. And, certainly, the hardſhips of ſuch a *limitation* cannot be great; ſeeing both the land and ſea, abound with ſo great a variety of animal

animal food, as might well ſatisfy the moſt ſenſual appetite; ſo much does one kind differ from another in taſte; and ſo variouſly may they be dreſſed.

To convince people of this conſtitution, how much it behoves them to be on their guard, I will further obſerve, that ſhould they be ſo happy as to eſcape ſudden death, or a *hemiphlegia*, either an incurable blindneſs or deafneſs may enſue; the memory alſo may be greatly impaired, or in a manner loſt. Or which is ſtill worſe, a melancholy perverſion of reaſon too often ſucceeds; ſo that theſe men, being now deprived of their intellectual faculties, cannot henceforth be ranked with rational beings; but remain drivelling idiots for life; and they once more, become by many degrees worſe than children; of which ſeveral evils I could produce various inſtances.

Whenever a perſon dreads ſome danger, the nature or cauſe of which he cannot explain, but is afraid to be left alone, or without his friends to protect him, *they* ought to comply with his fears; and endeavour to divert him from ſuch apprehenſions; whilſt, at the ſame time, the proper means are uſing, to bring about a more equal circulation, and alſo to free the veſſels of the brain of the ſurcharge they ſuſtain, in the way that will ſoon be mentioned; though all the painful applications that may there be propoſed, need not as yet be made.

This dreadful ſtate of mind may continue ſeveral days, or even weeks; but when the patient looks ſtedfaſtly and ſuſpiciouſly, as if he perceived ſome ill-diſpoſed perſon lurking in a corner, or follows ſome imaginary object with a diſtruſtful eye, and ſometimes endeavours to ward it off with outſtretched arms, and again dodges or ſhrinks as if

to

to avoid a blow, a mortal ſtroke cannot be far off; or rather it may be given that ſame night, after the patient had been ſome hours aſleep; the recumbent poſture favouring a greater afflux of the blood being made to the brain. His anſwers to indifferent queſtions, during the above melancholy dejection of mind, might have been pertinent, though ſigns of the utmoſt diſtreſs were then ſtrongly marked on his countenance; and he oftentimes yawned, as if his jaws were never to cloſe.

An *apoplexy* may kill as ſuddenly as a ſhot paſſing through the head. Yet, when the diſeaſe was milder, I have been preſent at the time of the attack, and obſerved, that ſome of the unhappy perſons who nevertheleſs retained ſenſe enough, to catch hold of the firſt fixt body that preſented, in order to ſupport themſelves, had at that inſtant of time loſt the uſe of one ſide. Others ſtagger before they drop down, and die in a few hours; and ſome again have a ſtrong ſhivering or *horrour* before they loſe their ſenſes. In the latter caſe, the patient being for the moſt part violently convulſed from the firſt attack, the phyſician, if he comes ſoon, generally finds him inſenſible, breathing in a ſnorting manner, and foaming at the mouth and noſe. The pulſe then is ſtrong hard and confuſed; but afterwards it becomes more regular, is rather ſlow, though it be ſtill full and hard, more eſpecially in the wriſt and *carotid* of the ſound ſide; and which *that* is, may be known at the firſt glance of one's eye; for the face and corner of the mouth are ſtrongly drawn upwards on that ſide, whilſt the oppoſite parts, being *paralytick*, hang down in a flaccid manner, and are pale.

On theſe occaſions, it is cuſtomary to plunge the lancet into a vein, in order to take away a

large quantity of blood; and the ſame operation is, perhaps, repeated again and again, without reflecting for one moment, whether the patient can bear the loſs of any blood at all, without being injured by it. But ſo raſh a practice, is in the higheſt degree unjuſtifiable; unleſs the diſeaſe came on during intoxication with ſpirituous liquors, and the patients were of a ſtrong habit of body; then indeed ſo much blood ought to be taken away, as may be thought ſufficient to abate both the general and local plethora; otherwiſe eight or ten ounces, are as much as any perſon of a middling conſtitution ſhould loſe; but thoſe who were weakly before the attack, ought not to be bled at all.

Whether the *apoplexy* happens from a debauch, a redundance of good blood, or of *mucoſity* in the fluids, (though I never ſaw one inſtance that could be fairly imputed to either of the two latter cauſes) reaſon dictates, that the preſſure made on the origins of the nerves in the brain, by the local ſurcharge that takes place in the ſuperiour veſſels, ſhould be removed; in order to prevent if poſſible, a rupture of their coats, if that has not already happened; or an effuſion of the *ſerous* parts of the blood being made on the cortical ſubſtance, or into the *ventricles* of the *brain*. For then, unleſs trepanning could be applied to advantage in the firſt inſtance, the patient would be abſolutely incurable, as that part is not furniſhed with thoſe veins that are neceſſary to abſorption; at leaſt ſuch have not as yet been diſcovered. The *morbifick* flow of the fluids towards the ſuperiour parts ſhould alſo be abated; and the *ſpaſm* which acts on the extreme veſſels ought to be removed as ſoon as poſſible; for a few hours may determine as to life or death on ſuch occaſions. We therefore, have but little time to try what might be effected,

fected, by the moſt boaſted attenuants or diſſolvents, in caſe the blood had been either too compact and denſe, or inertly viſcid, according to the common and often chimerical way of ſpeaking on this and other diſeaſes.

In order to rouſe the patient from his preſent inſenſibility, the moſt ſtimulating means muſt be uſed; for ſuch as are gentle will avail nothing. He ought to be raiſed nearly to a ſitting poſture, and have hot bricks laid at a convenient diſtance from his feet and legs, with the view to take off the conſtriction, which, at ſuch times, acts ſo ſtrongly on theſe parts, that *they* are commonly cold, or have not a proper warmth. The ſharpeſt volatiles muſt be held long to the noſe, one noſtril being ſtopt, and the ſpirit held cloſe to the other, that it may act with greater force on the extremities of the nerves. But if it does not affect him ſufficiently in this way, a feather or rolls of ſoft linen dipt in the ſame ſpirit, muſt be thruſt far into the noſtrils, and ſuffered to remain there for ſome time; and the lips and tongue ſhould alſo be rubbed with it; no matter how much they may be inflamed thereby for the preſent, as *this* will eaſily be remedied afterwards. Nay, it may even anſwer a good purpoſe to whip with nettles to encreaſe the irritation. The upper parts of the arms and thighs ought to be bound moderately tight with broad tapes, in order to check the impetuous return of the *venous* blood towards the heart; but without compreſſing the large arteries which lie deep; and ſtrong frictions ſhould likewiſe be made downwards along the courſe of *theſe* veſſels, to puſh the blood more briſkly forwards in them, in order to dilate and reſtore the circulation in the extreme ones, which now are ſtrongly affected with a ſpaſm. But, whenever the external veins appear very full,

and the limbs ſwell below the ligatures, *theſe* ſhould be ſlackened, but not entirely caſt off; for it will ſtill be neceſſary to intercept ſome part of the returning blood, and alſo to make frictions at times as above, till the perſon recovers his ſenſes. But *theſe* and all other applications muſt, as much as poſſible, be made without uncovering the patient, for reaſons that will readily occur to thoſe, who have any notion of an unnatural conſtriction of the outward ſmall arteries, being the immediate cauſe of the diſeaſe. Yet, notwithſtanding all we can do to remove *this ſpaſm*, *it* will probably be not only continued, but alſo communicated to a greater number of veſſels, ſhould the outer ſurface of the body be much expoſed to cold air.

A bliſtering plaſter ought to be laid over the whole head, and other *epiſpaſticks* applied directly to, or near any part, in which an overfulneſs hath happened, ſuppoſing no inflammation has yet enſued. And further applications of the ſame ſort may be needful as ſtimulants, made to different parts of the body. A ſoft paſte made with flower of *muſtard* and water * being ſpread thick on ſoft leather, ſhould be laid as *poultices* to the palms of the hands and ſoles of the feet. Active clyſters made with *coloquintida*, *ſenna* and *common ſalt* boiled with water, muſt alſo be injected every hour or ſecond hour, whether they come away or not, in order to promote plentiful and repeated diſcharges from the *abdominal viſcera*, that a more ſpeedy and effectual revulſion may be made from the ſupe-

* Garlick, leaven, wheat-flower and other things are commonly added to the *muſtard*, and the whole is afterwards mixt with vinegar; but neither one nor the other of theſe is proper, when the application is intended to act either quickly or powerfully; for the vinegar in a manner deſtroys the effect of *this* excellent remedy, and the other ingredients weaken it.

riour

riour parts. But, as this end is effected with difficulty, by reaſon of the preſent inſenſibility of the patient, one drachm or more of *emetick tartar*, or a few ounces of *eſſence* of *antimony*, may ſafely be added to each injection, to make it ſtill more operative.

Nothing is more common, than for the inteſtines to diſcharge themſelves, at the firſt onſet of this diſtemper; owing to the *convulſive conſtrictions* they are then made to undergo. But *he* who believes, that the belly needs not to be more looſened, becauſe the patient had a ſtool at that time, reaſons on too narrow principles; for much more is now required, than barely to empty the inteſtines of formed excrements.

Hitherto we have ſuppoſed the patient inſenſible and unable to ſwallow, elſe ſome of the above painful applications might be ſpared. Yet, however ſlight the attack might be, the head ſhould be bliſtered, the belly freely looſened, and hot bricks laid to the legs and feet.

When he is ſo far rouſed, as to have ſome obſcure notions of what is doing about him, (which, holding ſtrong volatiles to the noſe will ſometimes effect for a moment) ſuch opportunities ſhould be embraced, to make him ſwallow one common ſpoonful of a briſk purging mixture every quarter of an hour till it operates. Such a medicine may be prepared with two ounces of manna, as much elixir ſalutis, of *magneſia* and *ſal catharticum*, each two or three drachms, one hundred and twenty drops of *ſpirit* of *hartſhorn*, from eight to twelve grains of *kermes mineral* (or two grains of *emetick tartar*) and ſix ounces of water.

How far frictions made about the head and neck, and along the ſpine with ſpirituous and volatile embrocations; iſſues made behind the ears

and in the nape of the neck; the Peruvian and winter's bark, ginger, wild valerian, muſtard, camphor, and ſuch tonick and ſtimulating medicines may afterwards be neceſſary, is left to the judgement of others; but for myſelf, I never knew a palſy cured, when it enſued from this diſorder; though ſome perſons ſtill ſurvive, after having been ſeized with it almoſt thirty years ago. But as was ſaid, in proportion to the injury which the brain and other parts of the *nervous* ſyſtem have ſuſtained, will death ſuddenly enſue, or the faculties of the mind and body be impaired; ſo that in a *hemiplegia*, the memory is bad; the patient ſpeaks ſlowly as wanting memory and utterance, and in a ſtammering and almoſt an unintelligible manner. I ſhall here relate the very ſingular caſe of a patient who ſuffered a violent ſhock from this diſtemper.

A man forty years old, who was ſtill weak from a pleuriſy, ſat in his garden for ſome time early one morning in March, when the weather was cold, the ſky overcaſt, and the wind high from the north-eaſt. In a little time an unuſual coldneſs with a painful ſtiffneſs, diffuſed itſelf from the feet upwards; which greatly alarmed him, as it gained faſt, not only on the veſſels, but on the muſcular parts. He therefore made all poſſible haſte to get to the houſe, which was not more than thirty yards diſtant; and having reached the threſhold, he fell down in ſtrong convulſions, which deprived him of all his ſenſes for ſeveral weeks. Yet, though from that time he ſeemed to have ſome confuſed notions of things, it was full three months before he attempted to ſpeak, by uttering a monoſyllable only; but *that* in a way, which no one underſtood. When he recovered his ſpeech ſtill more, it was diſcovered, that he had not only forgotten

gotten words, but alſo all his former knowledge; for he neither knew his wife, children, nor indeed any other object; and as he conſtantly miſcalled things, he was continually on the fret, becauſe his meaning could not be comprehended. Even after his language was better formed, he ſeldom gave things their proper names; which cauſed much mirth to others, but great vexation to himſelf. In ſhort, his former ideas were wholly effaced; and in this reſpect he was once more a child, having every thing to learn anew, and was again taught to read and write. This man was recovered more than twelve years ago by the treatment propoſed above, and is now luſty and ſtrong. His memory, however, is impaired, and he ſpeaks in a haſty ſtuttering manner, more eſpecially when he frets or is hurried, as often happens; for he naturally was of a paſſionate temper, and is more ſo now than he was before. But this defect in utterance, is moſt perceivable when the weather is ſultry and damp.

This perſon was attacked in the manner we mentioned in the year 1755; and ſince writing the above in 1769, he undertook a jaunt of fiſhing and hunting to the ſea-iſlands in the month of November. But the weather being cold, wet and ſtormy, and the ſea running high, the boat was in a manner filled with water, whereby he was ſo thoroughly chilled, that a violent anxiety preſently enſued, and put an end to his exiſtence in a few hours; but without any convulſive ſtruggles.

The above is the only inſtance I know, of any one recovering of an *apoplexy*, without more plain traces remaining of a palſy. But many might be named, who in other reſpects enjoyed tolerable health, under a *hemiphlegia* or ſome other paralytick effect of that diſeaſe.

Intermitting fevers are not common in the winter, except they enſue as conſequences of other diſorders, which weakened the conſtitution, and the weather is warm and damp at the ſame time; when indeed thoſe who were not fully braced, after having diſeaſes of this ſort, may ſuffer relapſes. And as at this ſeaſon the belly is for the moſt part bound in fevers, it will be neceſſary to add a little *ſal catharticum* or manna to the bark at firſt, or even afterward, whenever ſtools are wanted. But in general a ſmall quantity of the *cortex* will remove intermittents in the winter.

People of middling habits of body, may, however, be ſeized with fevers, attended with coughs; but if the expectoration be properly promoted, they will either ceaſe in a few days, or dwindle to quotidians, whoſe returns will happen about four o'clock P. M. the paroxyſms ending about the ſame hour next morning.

What hath been ſaid of healthineſs in ſummer, after the weather hath become ſteadily warm, and whilſt it continues fair, is as applicable to a clear cold ſeaſon; for no epidemick belonging to this climate will appear, till a change happens in the ſtate of the air. Yet, thoſe who are ſubject to the ſpaſmodical aſthma, may ſuffer ſeverely, when the weather is ſerene and cold; and it may likewiſe be difficult either to bring on or ſupport a free expectoration, in other diſeaſes of the lungs.

Of the SPASMODICAL or CONVULSIVE ASTHMA.

THOUGH this diſeaſe is never epidemical with us, yet it is moſt common to children under ſeven years of age; it likewiſe attacks men who are paſt the prime of life, or women in whom the *menſes* have ceaſed; and ſuch alſo as are obſtructed or have that diſcharge too ſparingly.

That this diſorder is truly ſpaſmodical, may be inferred from the manner of its attacking and receding, more eſpecially when it is periodical, as it ſometimes is. For, excepting ſome degree of cough and ſpitting, the patient ſhall be eaſy and tolerably well throughout the day; but at ſome indeterminate hour in the forepart of the night, he ſhall all at once be ſeized with ſuch a ſtifling, as obliges him to ſit up; for he cannot lie down for fear of being ſuffocated; and he is equally afraid of falling aſleep, leſt he ſhould be ſtifled before he could awake. This diſtreſſing ſcene is attended with ſuch a thirſt and dryneſs of the mouth and throat, that, though he ſips ſomewhat warm ever ſo often, theſe parts ſhall ſtill continue parched; and he has the ſame ſenſation in the noſtrils and paſſages leading from them to the lungs, in which the ſecretions ſeem now to be intercepted. The head alſo ſuffers in a remarkable manner, as if it were loaded and full; and it is every other way diſordered, except that the pain is not very acute. After having undergone the utmoſt horrour and diſtreſs in this manner during the night, towards the morning, the ſymptoms abate almoſt all at once, and reſpiration becomes eaſy, as if the ties with which the organs ſeemed to be bound up,

were

were juſt then looſened; the conſtrictions which happened on the reſpiratory paſſages and the *bronchia* being now removed, the ſecretions are reſtored, and a plentiful ſpitting enſues. The perſon likewiſe is freed from the intenſe thirſt he ſuſtained, and the head alſo is relieved of the uneaſineſs that was perceived there, owing to the plethorick condition of the ſuperiour veſſels; and thus, the patient ſeems almoſt inſtantly to be reſcued from the danger of immediate death.

Whether this obſtruction to breathing in elderly ſubjects, ariſes always from the pulmonary conſtrictions we mentioned, or ſometimes from the like cauſe affecting the diaphragm, a ſpaſmodick contraction of the ſame ſort likewiſe acting at the ſame time on the external ſmall arteries, the event will be nearly the ſame. For if a more ſudden death does not enſue, either an *aſcites*, *anaſarca*, or with greater certainty, a dropſy in the breaſt will follow from both complaints, if they cannot be removed in time. This point however, will not be ſo eaſily attained, more eſpecially, if the diſeaſe has been of long ſtanding. For though it appears ſometimes periodically, and the returns of it may be put off now and then, or the paroxyſms ſhortened, it will not, perhaps, be in our power, wholly to prevent them, ſo far as I yet know. Nay indeed, in ſome caſes the patients can ſcarcely be ſaid to have any intervals of eaſe; but then it generally proves quickly mortal to them.

As the hands, but more eſpecially the legs and feet loſe their warmth before the attack, and they continue more or leſs cold till the diſorder is on the decline, hot bricks ſhould be laid at a proper diſtance from the ankles; the arms alſo muſt be covered, and warm applications made to the breaſt and ſides. The patients ſhould likewiſe breathe in the

the ſteams of warm water; or which is better, of a decoction of poppies. And, becauſe the ſubjects of theſe complaints are commonly coſtive for ſome days before the diſeaſe comes on, and they ſeldom have ſtools during their continuance, a diarrhœa ſhould not only be promoted at the beginning, but the belly ought to be kept moderately looſe throughout the diſeaſe, for reaſons which have been repeatedly given. To this purpoſe the laxative antiſpaſmodick mixtures which have been ſo often recommended, will anſwer as well or rather better than moſt other purgatives; and whilſt they are operating, a warm bed-pan muſt be carefully put under the patient, leſt the ſweat we wiſh to promote, ſhould be checked by his getting up. And after the purging and ſweating have been properly conducted, the perſon ought to be diſpoſed to reſt with a ſuitable doſe of laudanum. But if he had a diarrhœa before the diſorder, (which very ſeldom happens) and *this* ſtill continues, recourſe muſt be had to *opiates*, joined with warm *antiſpaſmodicks* and volatiles, to be given at proper diſtances of time between each doſe; and care ſhould be taken to ſupport a proper heat in the extreme parts.

As the conſequence of theſe reiterated violent ſpaſms muſt be, to produce a ſtill greater degree of *atonia*, both of the nervous and ſanguiferous ſyſtem, which will incline the patient yet more to this diſeaſe, I never doubt to give the bark joined with diaphoreticks in the intervals between the paroxyſms.

When the above methods have been purſued early and with the neceſſary care, the moſt diſtreſſing ſymptoms were often abated in a few hours; and the patient eſcaped the complaint for a longer time afterwards; yet a cough and ſpitting will ſucceed every paroxyſm, in order to free the lungs of

of whatever humours might have been collected in their ſmall veſſels, or perhaps to diſcharge ſome degree of overfulneſs, which might yet remain in them. But if the diſeaſe is not mitigated by the above treatment, a large bliſtering plaiſter, ſhould be applied between the ſhoulders, another being at the ſame time laid acroſs the lower part of the ſternum; and one to each ſide if needful. Yet theſe applications need not all be made at the ſame time, unleſs the caſe be extremely dangerous. Half a grain or a whole one of *opium*, four or five grains of *camphor*, ſeven or eight of *volatile ſalt of hartſhorn* and one grain of *kermes mineral* ought to be given every hour in a bolus, till the violence of the ſymptoms is abated. The ſteams of warm water, having a few grains of opium diſſolved in it, or of a decoction of *poppies*, ſhould alſo be breathed in. And this injunction may the more eaſily be complied with, as, very generally, the patients cannot lie down for fear of ſuffocation.

The ſame ſedative *antiſpaſmodicks* joined with ſtimulants, ſhould be uſed, in convulſive affections of the *diaphragm*; but hot tiles wrapped in flannels, ought to be laid to the ſides and *cartilago enſiformis*. I have alſo known ſome relief given, by applying a large cupping-glaſs with ſtrong ſuctions, to the ſame parts.

It was juſt now ſaid, that a ſpaſm of the *bronchia*, *pulmonary veſicles* and of the *diaphragm*, produce nearly the ſame effects, not only by rendering inſpiration extremely difficult, but alſo by their terminating in *dropſies*, if the patients are not deſtroyed by the original diſeaſe before theſe diſtempers ſupervene, when they together will certainly prove mortal. For breathing continues as difficult after the *dropſies* have come on as it was before; and it will ſtill be more ſo, if the *ſerous effuſion* happens

happens in the *thorax*. But the diſtinction with regard to the ſeat of the primary complaint, may probably be beſt made at its firſt onſet. For, if it be in the *diaphragm*, the patient will perceive an acutely painful tightneſs, as if he were ſtrongly girded from the lower part of the ſternum quite round the body, to which a difficulty in breathing immediately ſucceeds. And in *this* caſe likewiſe, the *pulmonary veſicles* and *bronchial membranes* may preſently be affected with the like ſpaſmodick conſtriction from a conſent of parts. But, if the *reſpiratory organs* are firſt affected, a ſtifling will be perceived at once, but without ſo great pain, tho' the patient is otherwiſe in the utmoſt diſtreſs, from the apprehenſions he is under of immediate ſuffocation. Here, breathing in the ſteams of warm water will be of eminent ſervice; but as he may not be able to receive theſe by ſuction through a funnel or out of a bottle, a baſon with hot water, muſt conſtantly be held under his mouth and noſe, whether he lies down or ſits up.

I have known *this* diſorder to anticipate the times of its return, (though indeed this ſeldom happens at regular periods) and likewiſe, to be much aggravated after it did attack, by a *flatulent* diſtention of the ſtomach and inteſtines, owing to *acidity*. In this caſe, *magneſia* together with *chemical* oils ought to be given in large doſes; and if need be, its purgative effect may be increaſed, with a ſmall quantity of ſal catharticum. Clyſters alſo made with *camomile flowers*, *carminative ſeeds* and *Caſtile-ſoap* boiled in water, ought to be injected now and then; and when neceſſary, theſe injections may be made ſtill warmer, by adding ten or more drops of oil of juniper to each, till the *flatulency* is diſcharged. After the inteſtines have been emptied of this expanded air and excre-

ments,

ments, *magneſia* and *crabs-eyes*, made pretty warm with *aromatick* oils muſt ſtill be given; or thoſe powders may be mixt with *camphor*, *volatile ſalts* and *opium*, if ſuch active antiſpaſmodicks are required. During the diſtended condition of the *abdomen*, it may likewiſe be of ſervice, to cover that part with a flannel, wrung hot out of a mixture made with *ſpirit* of *wine* and *chemical oils*, as thoſe of mint or cloves; and the application ought to be renewed as often as the flannel dries. But as the patients generally have warnings of the approach of the diſeaſe, perhaps for ſome days, when the latter cauſe contributes to it, it might then be prevented by giving a gentle vomit, provided the perſon be not coſtive; but if he were, looſe ſtools ſhould be promoted with *magneſia* before the emetick is adminiſtered; and alkaline powders, together with an *alkaleſcent* diet muſt afterwards be uſed for ſome days.

The ſubjects of this complaint ſhould keep within doors, when the weather is windy, wet and cold, or even if it be cold and clear; but if it be ſultry and damp, the danger will not be ſo great, unleſs this ſort of air ſhould incline them to it, by inducing an *atonia* of the *nervous ſyſtem*; and they ought to take particular care, that the legs and feet have a good warmth; if not, *this* muſt be ſupplied with hot bricks and proper covering; for theſe parts will aſſuredly be more or leſs chilled before the diſeaſe can happen at all.

Between the attacks of this and every other periodick diſorder which depends on a general or even a local weakneſs and irritability of the ſolids, and whether it returns at ſtated or irregular times, the bark ſhould be given together with aromaticks, alkalies, ſteel or laxatives, according as theſe ſeverally may be required.

When

When the weather was very cold in the winter a corpulent lady near ſeventy years of age, was ſeized with the *ſpaſmodical aſthma*; which never entirely ceaſed whilſt that ſeaſon continued. But as the complaint always increaſed at night, the ſhort ſlumbers ſhe then had, were taken in an eaſy chair, unleſs when the violence of the ſpaſms was abated by laudanum; twenty drops of which being given every hour, till the quantity of it amounted to one hundred or more; which keeping her pretty eaſy for ſome hours, ſhe was then able to lie bolſtered up in bed. However, when the effect of *that* medicine was over, the diſorder returned, though not with the ſame violence through the day. All the other means mentioned above, were uſed here occaſionally; but without any laſting relief. I then told the relations, that I had no hopes of her being freed from this diſeaſe, till the weather became ſteadily warm in the ſummer; but that, in the mean time, our aim muſt be to ward off the danger, till that ſeaſon returned, the warmth and moiſture of which, I expected would abate theſe local conſtrictions. This happened accordingly. For, as the weather grew warm, the contractions decreaſed, and at laſt they almoſt wholly ceaſed: but in proportion thereto, ſhe became liable to a ſpitting; which by midſummer was as profuſe both by night and day, as if it had been excited by mercury; a conſtant thirſt and parchedneſs in the throat attending it. This diſcharge conſiſted of a white frothy *mucus*, which often had a ſaltiſh taſte. And, though it was an excellent iſſue, or made, as it were, a powerful revulſion from the reſpiratory organs, yet, from the quantity and continuance of this excretion, her fleſh was greatly waſted. But, whether the complaint may not return

turn with the winter, and prove fatal to her, muſt be left to time. *

* The moſt acute ſpaſmodical aſthma I have ſeen, was in a gentleman thirty-three years old, who abuſed a conſtitution that was naturally delicate, with what is called good-felloſhwip; in the courſe of which he had repeatedly contracted a *gonorrhœa*; and he alſo was liable to *nephritick* complaints. His diſorder ſeemed to have been a *ſpaſm* of the *diaphragm*, which nothing could remove for ſix hours together, though it commonly abated a little during the heat of the day; but never ſo much, as to permit him to lie down from the firſt, for fear of his being ſtifled. This perſon died in the ſpace of a month, exceedingly bloated with an *anaſarca*; having many *mortifications* from his toes to his hips; the latter of which were *ſphacelated* in a moſt frightful manner. And the day preceding his death, the *penis*, together with the *ſcrotum* and its contents ſeparated from his body.

From what has been ſaid of this patient, and his not having any perceptible fever till within a few days of his death, it will appear, that the diſorder was plainly *convulſive*, and without any mixture of inflammation, (according to the common acceptation of that term) notwithſtanding the opinions of thoſe who aſſert, that *ſpaſms* do not always act, but rather that they recede and are again exaſperated, either at certain or uncertain periods; whereas in *this* gentleman, they never ceaſed; and I have ſeen them hold for ſix weeks together in the *opiſthotonos*. But though it was ſaid, that the violence of the ſymptoms yielded a little in the heat of the day, yet, he never was ſo free from the firſt, as to be able to lie in bed, even bolſtered up, for a quarter of an hour together; but ſat conſtantly in a chair; breathing with ſuch difficulty, that his ſhoulders were heaved ſtrongly upwards, at the time of inſpiration. If he ſlumbered but for a few moments, which happened but very ſeldom, pillows were piled ſo high on a table before him, that he had occaſion only to incline a little forwards to reſt his head upon them. But he was preſently obliged to ſtart up, and pant for breath, with ſuch excruciating pain, as made him call inceſſantly for eaſe, which opiates did not procure, though near three hundred drops of laudanum were given in twenty-four hours. This quantity however was inſufficient to overcome the violent determination of the *nervous power* towards the affected parts; and therefore I ought to have ventured on more; for it probably was owing to this diffidence, that I loſt my patient, though every thing elſe that then occurred to me was done for his relief.

Of

Of the HOOPING-COUGH.

THOUGH the *hooping-cough* be not an *epidemick* of this climate, but is brought hither from other parts, its approach having always been heard of before it appeared amongſt us, I have given it a place in this eſſay, as perhaps, ſomewhat new may be ſaid on that dangerous and obſtinate complaint. In the ſpace of twenty-ſix years this diſeaſe was *epidemick* here at three different times; twenty-one years elapſing between its firſt and ſecond appearances, ſo far as I remember; and a little more than five years between the ſecond and third; when like moſt other contagious diſorders, it did not ſpare any one, who had not paſſed through it before.

Hitherto it always ſhewed itſelf in January or February; and when left to its own courſe, few recovered of it before June; but the weather being changeable, and the winds blowing often from the north or eaſt in the year 1759, it continued, in ſome patients, till November, when it was baniſhed by the meaſles. During the above year, the cough either abated or increaſed, according as the weather was hot or cool; and the conſequences of ſo long a continuance of it, have ever ſince been ſeverely felt by many. For ſo weakened were the *organs* of *reſpiration* by the violent and inceſſant exerciſe they endured, that thoſe patients became liable to either *catarrhal coughs* and *ſpittings* or a *pituitous aſthma*; the latter being moſt apt to return, whenever the weather from being cold and clear, changes to warm and moiſt; the former likewiſe being aggravated by this ſort of air; yet, be the ſeaſon what it will, the cough is more or leſs troubleſome daily. And during the *hooping-*

cough of the ſpring in 1765, both the *cough* and *aſthma* that were contracted more than five years before from the ſame diſeaſe, were then more troubleſome than at other times. I obſerved in the laſt mentioned year, and it was the ſame in 1759, that though the patients ſeemed pretty free from the cough for ſome weeks, whilſt the air was warm and ſerene, and the wind ſoutherly, it nevertheleſs returned with almoſt the ſame violence as before, when the weather became cold wet and windy, from the eaſt or north-eaſt. If the diſeaſe continues after the ſummer is ſet in, it is more dangerous and difficult of cure, becauſe the patients being more relaxed, and weakened, they become ſo much the more liable to *fevers*, *diarrhœas* and *convulſions*, both from the nature of the diſorder, and the greater irritability of the *nervous ſyſtem*, which inclines people to the above complaints at this ſeaſon.

That the diſtemper we ſpeak of, is of the *convulſive* ſort ſeems plain; for during the fits of coughing, the hands and feet are clammy and cold; the patient loſes the power of ſupporting himſelf; the ſtomach, inteſtines and bladder frequently diſcharge their contents, and general convulſions often ſupervene, and too frequently prove fatal. *Anger*, *fear*, *joy*, or *ſurprize* all precipitate the cough; but without being brought on by ſuch cauſes, which are common enough to children, *it* may return of *its* own accord, oftener than once in an hour, or at longer or ſhorter intervals, according to the mildneſs or ſeverity of the diſeaſe, and as the weather happens to be warm or cool; in which a few degrees either way, will make a ſenſible difference, in this and many other diſorders.

Whatever

Whatever be the cauſe of this diſeaſe, from all I could remark in numberleſs inſtances, it principally if not wholly affects the *larynx*; the membrane that lines the inſide of the *trachea*, and the *bronchial veſicles*; but by no means is the ſtomach chiefly affected as ſome have ſurmiſed; becauſe the cough cauſes the patient to vomit. Were this a juſt ſuppoſition, we might then expect a vomiting rather than a cough; whereas, in many, there are no vomitings at all; and when they happen, it is generally towards the cloſe of the fits of coughing. And, ſince it is alſo common, for the inteſtines and bladder to diſcharge themſelves, we might, with equal probability, ſuſpect the cauſe to act moſtly on theſe parts, as ſome writers have imagined it does on the ſtomach, though we have plain proofs to the contrary. For the truth is, that theſe ſeveral collateral circumſtances, proceed from one and the ſame cauſe; namely, the general *ſympathetick conſtrictions*, that take place at the times of coughing, in all the *muſcular* and *membranous parts*; as happens on the attack of either an *apoplexy* or *epilepſy*, in which the *excrements* and *urine* are often expelled.

This diſeaſe, commonly begins with a frequent but dry cough; nor have the patients *that running* at the noſe, *ſnuffling* or hoarſeneſs, which often enſue from catching cold. The *coughing* by degrees holds longer, and becomes ſo ſevere in a few days, that the ſick ſcarcely have time to breathe during the fits. For ſo *ſpaſmodically* affected are the lungs and their appendages, that one interrupted act of *violent expiration* continues, till the patient, being ready to be ſtifled, is obliged to fetch breath with all his might, in ſpite of the convulſed condition of theſe organs. The lungs, being expanded by this *inſpiration*, receive the blood from the right

ventricle of the *heart*, and the *auricle* diſcharging itſelf immediately, *it* then can admit the blood from the *vena cava*, whereby the ſuperiour veſſels are, in part, relieved from their fulneſs.

That an exceſſive repletion takes place in the parts above at ſuch times, is evident, from the *ſwelling of the neck and jugular veins*; *the livid fulneſs of the face*; *prominent, red and watery eyes*; *violent head-ache, giddineſs, blindneſs, ringing or buzzing noiſe in the ears, bleeding at the noſe, and from the lungs*; *and the dangerous and even fatal convulſions that frequently ſupervene.* The cough however does not ceaſe with one or two ſuch vehement efforts to breathe. For, as the fit may continue for the ſpace of a minute or longer, the patient will be obliged to exert ſeveral ſuch forcible inſpirations, before the coughing ceaſes; nor will *this* be, till more or leſs of *viſcid* phlegm is brought up; and only ſo far does a vomiting contribute to ſhorten the paroxyſm, by aſſiſting in the expulſion of this *mucus.* When the fit is over, the perſon pants and is almoſt lifeleſs for a while, as being in a manner ſpent with the violent exerciſe he had undergone.

From the ſhrill or hollow ſort of noiſe, that is made by the ruſhing of the air into the aperture of the windpipe, which is now convulſively conſtricted, the diſeaſe hath the name of *hooping-cough.* But *this* ſymptom does not occur in every caſe; and when it is wanting, the diſorder may with reaſon be judged milder; for it ſhews a leſs degree of ſpaſm.

In this diſtemper, I have tried all ſorts of *balſamicks* and *pectorals*, without any advantage; oily and other relaxants rather did harm, and *opiates* alone were of but little uſe. For though I indiſcreetly ſtupified ſome patients, *they* nevertheleſs coughed

coughed as often and ſeverely when overwhelmed with ſleep, as if nothing at all had been given. Nor can I ſay, that any benefit attended my practice, till I conſidered the diſorder as a *convulſion* of the *reſpiratory organs*, owing to ſome ſort of *acrimony* irritating the nerves that are diſtributed to theſe parts; but of what nature *this* was, I had no knowledge. And even after the complaint was taken in that view, the milder *antiſpaſmodicks* were of little ſervice; which determined me to try others that were more active.

The diſeaſe plainly divides itſelf into two periods, *viz.* the firſt attended with a dry convulſive cough, and the ſecond, which, though *it* be equally *ſpaſmodical* with the former, is yet attended with a plentiful ſecretion in the *trachea* and *lungs*. Indeed, this *ſecretion* ſeems moſtly to be made at the time of coughing; for though a large quantity of *mucus* be ſometimes brought up before the cough ceaſes, a rattling of looſe phlegm is ſeldom heard in the lungs, during the intervals between the fits, as happens in moſt other diſorders of theſe parts.

In attempting to cure this complaint, I confine the patients to a warm, but not too cloſe room, more eſpecially if the weather be cold and dry; and they are made to breathe in the ſteams of warm water often, in which a few grains of opium have been diſſolved. Cold drinks are abſolutely forbidden; and they are directed to ſip ſmall quantities, but frequently, of ſome gently antiſpaſmodick diluting liquor, rather warmer than in moſt other diſeaſes. To this purpoſe, an infuſion of *ſage*, *hyſop* or any other mildly aromatick herb made with water, and ſweetened a little with honey, will ſerve. In the firſt period, the belly ought to be kept moderately looſe, with either *manna*, *rhubarb*, *magneſia*, or *ſal catharticum* given occaſionally in ſmall

doſes; to which ſome *chemical oil* and a ſmall quantity of *eſſence* of *antimony* have been added.

For an infant of three or four months old, one *drachm* of *ſpirit* of *hartſhorn*, as much *tincture* of *cantharides*, five or ſix drops of *laudanum*, and about twenty drops of *eſſence* of *antimony* ſhould be mixt together; of which five or more drops may be given every ſecond hour or oftener with a little warm tea; and *this method* muſt be purſued throughout the firſt ſtage; by which means, I have often known the diſeaſe moderated, even at this early period. But, as has been ſaid, the *diaphoretick laxatives* and *alkaline powders* ought to be interpoſed when neceſſary, more eſpecially the latter; for the firſt paſſages muſt be kept as clear from *acidity* as poſſible; becauſe *this*, by its irritation, might greatly aggravate the ſymptoms. And in order to prevent the ſuperabundant generation of *that acrimony* anew, the patient ſhould be fed with broth made with lean meat, rather than with milk and flower, or ſuch aceſcent things, as the diet of infants too commonly conſiſts of. Moreover they ought to ſuck but ſparingly. It is not however to be underſtood though warm things are recommended, that the patients ſhould be made to ſweat profuſely.

Strong adults ſhould loſe ſome blood at the beginning of the hooping-cough; and, after being purged, a quarter or half a grain of *opium*, ſix grains of *volatile ſalt* of *hartſhorn*, half a grain of *cantharides*, and one grain of *kermes mineral* ſhould be given every ſecond hour in a bolus, which ought to be made juſt before it is given; and when neceſſary, five or ſix grains of *ſal catharticum* may be added to each doſe, till a free ſtool is promoted; for the belly ſhould ſtill be kept rather open. The common effect of this method was, that in the

ſpace

ſpace of a week, the cough was greatly mitigated; and ſome people were in a manner cured in a few days, when a *ſtrangury* was brought on; but *that* never happened from the *tincture* of *cantharides*, ſo far as I have yet obſerved.

The ſecond ſtage may be ſaid to commence, when the *ſecretions* become free in the lungs; and *then* I think it time to brace the conſtitution with *Peruvian bark* given in decoction or powder. To prepare the former, one ounce of coarſely powdered bark, and two drachms of *ſerpentaria* cut ſmall, muſt be boiled in a pint and a half of water, till only eight ounces remain. The liquor being ſtrained and cooled, ſixty or eighty drops of tincture of *cantharides*, one hundred and forty drops of *ſpirit* of *hartſhorn* and forty or fifty of *eſſence* of *antimony* muſt be added to make a mixture, of which two common ſpoonfuls ſhould be given every ſecond hour to an adult, and when neceſſary, two drachms or more of *ſal catharticum* may likewiſe be diſſolved in the decoction. In a few days, half an ounce of the *cortex* in fine powder may be added to the mixture. A child of five or ſix years old may take one ſpoonful of the above compoſition; but for an infant of one year, a weaker decoction will ſerve; to one ounce of which, twenty or thirty drops of *ſal volatile oleoſum*, five or ſix of *eſſence* of *antimony*, and ten or twelve drops of *tincture* of *cantharides* being added, and ſweetened a little, two or three ſmall tea-ſpoonfuls of the mixture ſhould be given as above; or in ſuch a manner, that the whole of it may be taken every day, till the cough ceaſes; and even then, it will be ſafeſt to give three or four doſes of theſe medicines daily for ſome weeks. When a ſtrangury was brought on, a ſolution made with *gum arabick* and water was given to remove it; but then the other medicines

were in the mean time uſed, but without the flies, ſo long as the ſtrangury continued.

Provided the patients were duly confined, the diſeaſe, generally, was ſo much abated in the ſpace of ten days by the above treatment, as not to be more troubleſome than a common ſmart cough uſually is; and it either ceaſed or gave but little uneaſineſs in a week more, unleſs the weather proved unfavourable. When things did not ſucceed ſo well, the *bark*, at leaſt contributed to prevent *thoſe fevers*, to which children in particular, became very liable, as the ſummer advanced; whereby many were loſt; either ſuddenly by *convulſions*, or more ſlowly, as being exhauſted of their ſtrength, by the cough and fever, together with the purgings, which for the moſt part attended them. For the ſtools being large and watery, the patients were quickly ſunk by *them*, unleſs *they* could be checked in time. But the obſtinate nature of the diſeaſe, together with the want of reſolution in the parents, not only with reſpect to forcing medicines and a ſuitable diet on their children, but alſo to keeping them from the breaſt, oftentimes made it impoſſible to ſtop theſe *diarrhœas*, becauſe the abundant *acidity* which prevailed in moſt caſes, was greatly augmented by ſuch miſmanagement.

At the beginning of theſe fevers, vomiting with *ipecacuanha*, ſometimes had good effects; or ſo much either of its tincture or of *eſſence* of *antimony*, was added to the other medicines, as promoted three or four pukes. But, when a full doſe of an *emetick* was adminiſtered, I uſually ordered the child's legs to be kept in warm water as deep as the calfs, all the time the medicine was operating, in order to prevent the general ſpaſms, that might be brought on by the cough and retchings, ſhould they

they happen together, as ſometimes fell out. But, whether a vomit were given or not to ſucking infants, it was endeavoured to clear the firſt paſſages of the prevailing *acid*, with *rhubarb* and *crabs-eyes*; and afterwards the latter were given freely, together with oil of mint and a ſuitable proportion of *ſal volatile oleoſum*. When the ſtools were large and ſerous, the vehicle for theſe medicines, was a decoction of *cinamon*, *cloves*, and *oak bark* made with water, to which a few grains of *terra japonica* were ſometimes added. The nouriſhment and drink were the ſame with thoſe which have been recommended for the like purgings in children; and here alſo bliſtering different parts had good effects. Whoever conſiders how delicate and irritable the conſtitutions of ſuch patients naturally are, how great their debility muſt be after having undergone ſuch ſevere trials in various ways, together with the depreſſing heat of the preſent ſeaſon, which much retards their regaining ſtrength, will eaſily perceive, that a perſeverance in the uſe of ſtimulating and *tonick* medicines, of a nouriſhing aromatick diet, and cordial drinks will be abſolutely neceſſarily to them till they regain ſtrength.

After a thaw, or a change from cold and clear, to either warm and fair or cloudy and damp weather, many complaints commonly appear; amongſt which, *catarrhous oppreſſions*, *coryzas*, true or falſe *pleuriſies* and *peripneumonies*, *inflammatory* or *ſerous quinſies*, the *gout* and *rheumatiſm* generally are moſt frequent. Thoſe who were far gone in *catarrhal conſumptions*, are likely to be ſtrangled, by the exceſſive ſecretions that now will be made in the lungs; of which the patients have not ſtrength to clear themſelves. The pituitous *aſthma* will probably attack with great ſeverity; and children, more ſpecially thoſe who had coughs before, are now

now in danger of *ſuffocating catarrhs*. Adults who are liable to a *vertigo*, ſhould not be much abroad then, leſt they be ſurpriſed with an *apoplexy*. In moſt of the above diſorders, the hands, but more eſpecially the feet, are cold or have but little warmth; nor can the patients be relieved, till a proper heat is communicated to theſe parts.

As to the general *horrour*, or a relative want of heat in the extreme parts, which happens before and returns at times during the courſes of many acute diſeaſes, the *gout* and *rheumatiſm* are not exempted from it; in particular, when a ſevere fit is forming. A local coldneſs, moreover, is perceived by many, for ſome hours before the *gout* fixes; whence, thoſe who are habituated to that diſeaſe, can foretel what is to happen and where it will be. This want of heat in that particular place, ſeems owing to a failure in the circulation there; which is cauſed by the irritation of ſome *acrid humour*, conſtricting the veſſels, whereby the progreſs of the fluids is obſtructed in them. Whatever be the nature of *that* humour which cauſes the *gout* and *rheumatiſm*, it ſeems pretty plain, that the fluids are made leſs fit to paſs the *capillary* canals. Accordingly a blow, wrench, or whatever ſtraightens the veſſels; as tight ſhoes, will bring on the *gout*, when the humours are in the ſtate we ſuppoſe; though without ſuch accidents, the patient might have eſcaped it for the preſent. Such accidental fits may indeed be ſlighter, than if they had been brought on by an abundant *acrimony*, and happened as it were of their own accord, or without having been contributed to by intervening caſualties.

Of the GOUT.

THE ſeeming difficulty to account for the *ſpecifick* nature of *that* humour, which either remotely or immediately cauſes the *gout*, and the very few inſtances of a complete cure being obtained, by any methods hitherto deviſed, have this effect on the patients, that *they* ſubmit, however reluctantly, to its tortures, from a perſuaſion that the *arthritick* matter muſt be diſcharged on the joints, as the only way whereby to free the conſtitution from it. This opinion ſeems indeed to be juſtified by many examples *; and it would undoubtedly

* A carpenter's mate on board one of his Majeſty's ſhips, was more afflicted with the *gout*, than any perſon I ever ſaw, who was not quite crippled by it. His duty requiring him to be on the deck when he was able, whatever the weather might be, it was very common for him to be ſuddenly attacked with *convulſions*, a *catalepſy*, a *ſuppreſſion* of *urine*, or excruciating *gripings*, with ſuch exceſſive diſcharges of blood by ſtool, as were likely to empty his veſſels of that fluid in a few hours; the extreme parts being always exceedingly cold on theſe ſeveral occaſions. Finding the common methods of treating his complaints gave little or no relief, and conſidering that thoſe various diſorders might proceed from the *gouty humour* being repelled on the internal and ſuperiour veſſels, or even on the *nervous ſyſtem*, by the cold damp air to which he was expoſed, I attempted to *recall it* to thoſe places, on which it formerly uſed to fix; by making ſtrong frictions about his *knees*, *ankles* and *feet*, with a roll of flannel dipped in a mixture of ſpirit of *ſal ammoniacum* and *muſtard*, and afterward covered the parts with poultices made with the above ingredients, wrapping him up warm, and laying hot bricks on each ſide of his legs and feet, and as ſoon as he could ſwallow, ſmall quantities of brandy and water in the proportion of one part of the former to two of the latter, together with a few drops of laudanum were repeatedly given, as hot as he could ſip them. By this method, the gout was in a ſhort time brought into one or another of theſe parts, and ſometimes into all of them together. And whenever *that* happened, the former ſymptoms ceaſed, as if by a charm.

A re

doubtedly hold, were there not means either to prevent, correct or expel thoſe *acrimonious humours*. And agreeable to the *above notion*, whenever the pain fixes, the limb is immediately ſwathed, perhaps, with many folds of flannel, leſt the matter be repelled (by the cold air I ſuppoſe) into the blood, as well as to make the part ſweat. But, ſuch a management exaſperates the inflammation, and prolongs the diſorder; whereby the ſtrength not only of the affected part, but of the conſtitution in general, is ſo impaired, by the continuance

A remarkably ſtrong luſty man, not forty years of age, who took great pleaſure in walking, was ſeized with the gout in the firſt joint of his left great toe. After being confined for ſome days, he became weary of ſtaying at home; and, though ſtill in pain, he undertook a long walk early one morning in the ſummer, whilſt the graſs was wet with dew and the air very moiſt. Before his return, the pain intirely ceaſed; but that night he was attacked with a *ſpaſm ſeemingly of the diaphragm*, which ſo obſtructed his breathing, that he could not lie down, or but for a very little while at a time. In this manner he continued with very ſhort intervals of eaſe, till about the beginning of the ſixth day, when he died in an inſtant of time, as he was exerting himſelf to ſpeak to his friends.

An active perſon of a thin habit of body, about fifty-ſix years of age, who before had two or three fits of the *gout*, fatigued himſelf by walking in the ſummer, when the weather was hot. Before he reached his houſe, a pain was perceived on the outſide of the left *metatarſus*; which he imputing to ſome ſtrain he received in walking, ordered cold water to be poured on the part, till the pain abated. Preſently after, he perceived ſome degree of *torpor* in that leg and thigh, which prevented his walking freely, as the parts ſeemed numbed; and that night he was ſeized with an apoplexy, which induced an *hemiphlegia* of the left ſide.

Were they neceſſary, inſtances might be given of gouty people being ſeized either with *faintings*, convulſions, the *ſpaſmus cynicus*, a convulſive contraction of one ſide of the face, a temporary palſy of the tongue or of ſome other part; the removal of which ſeveral diſorders, depending moſtly if not wholly, on bringing the gouty humour to the extremities.

of

of pain, want of reſt, fever and confinement, that the patient becomes ſtill more liable to the *gout*, as well as to other diſorders. It ought however to be conſidered, that it is impoſſible to make the part ſweat by theſe means, whilſt the inflammation is in its progreſs. On the contrary, by keeping it too hot, and the compreſſion of ſo many turns of a roller, the inflammation and pain muſt neceſſarily be aggravated. Beſides, the woolly fibres of the flannel, acting as *ſtimuli*, irritate the extremities of the *nerves*; and thus the ſymptoms are increaſed.

To forge a theory of any one diſeaſe, and invent a fictitious method of cure thereon, would in the higheſt degree be wicked. But, if the *gout* never attacks, without giving proofs of the preſence of one particular ſort of *acrimony*, I think we cannot be much miſtaken, in ſuppoſing *that* to be one, if not the principal cauſe of the complaint; more eſpecially if the diſtemper which this would have brought on, can be averted, by removing or correcting a redundance of *that acrimonious humour*.

That *acidity* may contribute to the diſeaſe we ſpeak of, ſeems altogether probable; for it has ever been obſerved, that thoſe who had been much troubled with an exuberance of this acrimony in their early years, were in a particular manner liable to diſorders of the joints, and alſo to the ſtone in their more advanced ages: nor is it difficult to conceive, how *this* ſharp matter, which fixes or precipitates the earthy parts of our fluids, and thickens the liquor of the joints, ſhould not only form thoſe *cretaceous concretions* that often are ſeen in patients, who have been habituated to *arthritick complaints*; but it alſo unites with the *mucus* that lines the *kidneys* and *bladder*, and thus generates

rates *calculi*; for the urine of *gouty people* abounds more with a *viſcid glairy ſediment*, when the paroxyſms are on the decline and even afterward, than is found in *that* of thoſe who are exempt from this diſtemper. It is alſo worthy of remark, that thoſe *calculous bodies*, are formed by the *morbifick matter* which cauſes the *gout* and *rheumatiſm*, in conjunction with the *mucilage* which lubricates the tendons and ligaments. For I never ſaw or heard of their being found in an *anchyloſis* of any other ſort; ſo that whatever may be the nature of the *arthritick humour*, it ſeems moſt adapted to aſſociate with the more *viſcid mucous ſecretions*, wherever they are to be found; as may be ſeen on the teeth, when care is not taken to prevent them. But this by the bye.

Nothing is more common, than for the ſame perſon to be tormented with the *gout*, *ſtone*, or *colick* by turns; and before an attack of the gout, and till it be on the decline, or even afterward, *colicky pains*, *acid eructations*, the *heart-burn*, as it is called, a *weighty* or *windy fulneſs at the ſtomach and in the hypochondria*, a *belching* or *rolling of wind* in the *lower bowels* and *coſtiveneſs* are common. In ſome people, a keen, but falſe appetite, precedes the fit, owing to the *irritation* of an *acetous* or ſome ſuch *ſaline acrimony*; and ſhould a *vomiting* or *purging* enſue, (though the latter happens but ſeldom) the diſcharges upwards will be *ſour*, and of a *verdigris* or *deeper green colour*, and the *ſtools ſharp*, *frothy* and *windy* *, as evidences of the abounding

* Such a looſeneſs happening once to myſelf, when the *gout* had fixed amongſt the *metatarſal* bones, I took a vomit with ſo good effect, that but little pain remained afterward; nor did the diſorder attack any other part as it always had done before. Hence it ſeemed, that the firſt paſſages being cleared of *acidity*,

abounding acrimony we ſpeak of. Theſe evacuations ſhould therefore be promoted, unleſs the patient be already weak and much emptied; in which caſe, *crabs-eyes* or ſome other inert *alkaly* ſhould be given freely, mixt with a warm cordial vehicle, together with a ſmall quantity of *thèriaca* as a *ſedative* and *diaphoretick*.

I am perſuaded, that, for the number of people, the *gout* is more common in this province than in any other country; and it attacks very many, in whom no hereditary taint can be traced: but

acidity, the circulating fluids, could not then have further ſupplies of *that acrimony* to *prolong* or *multiply* the *diſeaſe*. After recovery I drank weak ſour punch at dinner for two days; and on the third night, the gout ſeized the head of the tibia, where the tendons of the *extenſor muſcles are inſerted*. But being ſuperficial, I preſently removed it by bliſtering the part, and taking magneſia freely. No more punch was uſed; and my diet for ſome time, was wholly of the *alkaleſcent* or neutral ſort. This was done, only by way of experiment; for by that time I began to ſuſpect *acidity* to be the remote cauſe of this diſeaſe.

In another place, I mentioned acidity, as contributing to ſeveral complaints of which it was not ſuſpected for being the remote cauſe. Accordingly a gentleman who had been very liable to the *gout*, applied to me, for the cure of a *herpes*, which every *ſpring* and *autumn* broke out on the *perinæum*, and ſpread over the *ſcrotum* and upper parts of the thighs. But, knowing the perſon's conſtitution, I aſked him, whether ſince the *tetterous* appearance, he was ſo ſubject to the gout in the ſpring and fall as formerly; his anſwer was in the negative. Suſpecting therefore, that the *arthritick* matter might thereby have been diſcharged, I adviſed him againſt checking *this* drain, that nature had formed for freeing the conſtitution of that humour. But being fond of riding, to which this was a hinderance, he ſome how found means to cure it; the conſequence was, that he had the *gout* regularly every *ſpring* and *autumn*, as well as the colick and *nephritick complaints* in the intervals between the *arthritick* diſorder, ever afterwards. Indeed he had been liable to theſe diſtempers, for ſeveral years, before the *herpes* appeared; but not ſo much to the gout after that broke out, till it was removed.

youths

youths ſprung from *gouty* parents, are ſometimes ſeized with *that* diſeaſe before they are twelve years old. It is thought by ſome, that the reaſon why we are ſo much inclined to *arthritick* diſorders, may in part be owing to the conſtant uſe that is made by many of weak ſour punch. Yet, though that ſort of liquor is now much leſs in eſteem amongſt us than it formerly was, this diſeaſe notwithſtanding is rather more frequent than before. But, in my opinion, it may with more probability be imputed to a bad digeſtion, from an *atonia* of the ſtomach; for that part is equally weakened with others, by the great and continued heat of our ſummer weather. It is indeed true, that the firſt Engliſh ſettlers of this country, ſuffered but little from the *gout*, though the climate muſt have been rather more ſultry and damp at that time than it is at preſent; becauſe, the land being now much cleared of trees and underwood, with which it was in a manner covered in thoſe days, the *air* conſequently has a freer paſſage through the inhabited parts of the province. But thoſe people led a laborious life; had many hardſhips to encounter, and their diet was more plain and ſimple, than that of their ſucceſſors.

Amongſt others, I myſelf have been liable to the *gout* for ſixteen years; which, excepting once, always returned in May. And indeed if we reſpect the diſeaſe ſingly, it will for the moſt part be more favourable during warm than in cold or changeable weather. But then, in our climate, another ill conſequence will unavoidably enſue from any complaint that weakens us at the beginning of ſummer; for in *this* weakened ſtate of the conſtitution, we are the more liable to ſuffer by various diſorders, during the warm ſeaſon; or rather till we are braced by the cold weather in the enſuing

ing winter. And even then, the ſick may ſtill be made ſenſible at times, that he no longer enjoys the ſame firmneſs of habit as before.

As ſoon as the gout attacks me, I take ſo much *manna*, *elixir ſalutis* and *tincture* of *ipecacuanha* mixt together, as will promote a few diſcharges each way, in order to clear the firſt paſſages from *acrimonious humours*; and whatever of *this* ſort may ſtill remain, is afterward removed with *magneſia*, taken daily to the quantity of three or four drachms, till the end be anſwered, or this medicine acts no longer as a laxative. When the pain is not deeply ſeated, a bliſtering plaſter is applied directly on the place, to diſlodge the *obſtructing fluids*, which elſe might cauſe a more extenſive inflammation. However, I do not always find it neceſſary, to allow *this* application its full effect; but remove it whenever the *varicous* appearances in the *ſubcutaneous* veins are no longer ſeen: for *theſe* veſſels could not have been cleared of the blood, with which they were thus diſtended, unleſs their correſponding canals were firſt releaſed from the *ſpaſm*; or the *viſcid* humours, which impeded the free paſſage of the fluids from one ſeries of veſſels to the others, were diſlodged. At this time and for ſome days afterward, my diet wholly conſiſts of ſuch things as are *alkaleſcent*; and I return to my uſual courſe of living by degrees; avoiding only *fruit*, *acids* and *fermented liquors*, till ſigns of an approaching fit are perceived; when I refrain from *ſugar*, *bread* and every other article, that in its own nature is aceſcent; and daily take the decoction of one ounce of *Peruvian bark* and three or four drachms of *ginger*, to which half an ounce of *magneſia* is added, till all apprehenſions of danger are over. It ſhould have been obſerved, that though the *gout* confined me only once in the year,

and that for a fortnight; yet in the courſe of the twelve months, I perhaps had twenty or more ſlight attacks of *it*, which often gave me great pain in walking; ſo that in a few years more I expected to be crippled or much diſabled by it. But theſe fears have now pretty well ſubſided.

Should the pain lie ſo deep, that bliſtering will not reach it, I take half an ounce of *magneſia* daily, and from twenty to thirty grains of *Dover's ſudorifick powder* at night, during the painful ſtate of the diſeaſe; for this latter medicine hath the moſt agreeable effects without cauſing any *ſtupefaction*; and it ſhortens the fit, by expelling part of the *morbifick* matter through the pores of the ſkin, whilſt the magneſia diſcharges the firſt paſſages of the *acid*, whence the circulating fluids might be ſupplied with fuel to ſupport the complaint. But the intention at preſent being to deſtroy *this* ſharp humour as ſoon as poſſible, and becauſe a ſmall quantity of *magneſia* purges many people briſkly, without *neutralizing* ſo much of the *acetous acrimony* as might be wiſhed, one drachm only of that medicine, muſt be mixt with triple the quantity of *crabs-eyes*; and a few drops of ſome *chemical oil* ſhould always be added to them.

It is thought by ſome, that the *nervous ſyſtem*, more eſpecially the *gaſtrick nerves*, may be impaired in ſome degree, by the repeated uſe of the above *ſudorifick powder*, which contains a large proportion of *opium*, and therefore that this effect may incline the patient ſtill more to the diſeaſe we now endeavour to remove. This might be true, if means were not uſed to prevent ſuch effects; but for the preſent we are to conſider, whether it would be more for the future advantage of the patient, either to permit him to undergo the tortures of this excruciating complaint for ſeveral months

months together, by its repeatedly attacking various parts one after another; whereby, not only the *organs* of *digeſtion*, but the whole habit muſt be greatly debilitated, or to alleviate the pain and ſhorten the *paroxyſm*, by any rational methods that can be deviſed. Thoſe who object to ſuch treatment, reaſon, perhaps, from *theoretical* principles, without having ever endured the pains of the *gout*; for if they had, I am much of the opinion, that to be relieved of *them* by any reaſonable means, would be thought a moſt deſirable thing. Beſides we ought to conſider, how many *ſpaſmodical diſtempers* there are, which repeatedly require the free uſe of *opiates*, even in the ſame perſon, by which diſtempers the patients would probably be deſtroyed, were theſe helps withheld, as no other medicines could afford the ſame relief. And further, we ſhould alſo recollect, that in Wards and Dover's preparations, the *opium* is ſo guarded, that it acts as a *ſedative* rather than a *ſoporifick*.

If bliſters are approved, they ſhould be applied as ſoon as the pain fixes; but never after a ſwelling or redneſs appears. But, during this painful ſtate of the diſeaſe, and whilſt the inflammation is in its progreſs, I have adviſed others to apply poultices made with bread and milk. A ſmall quantity of *ſtramonium* boiled with the milk of which the poultices are to be made, or a few leaves of the *ſame plant*, being bruiſed and applied will abate the pain; as the two former poultices likewiſe do. And by thus inducing an *atonia* or laxity in the part, a ſoft tumour ſucceeds with great relief to the patient; for little or no uneaſineſs will afterwards be perceived in that joint, unleſs it be put in motion before the ſwelling is diſcuſſed, or the part hath regained ſtrength.

It ought however to be obſerved, that without the uſe of internal medicines and a proper diet, no great confidence is to be placed on external applications. For though it be very poſſible to abate the pain in one or more parts by theſe means, it is yet certain, that ſo long as any of the *arthritick matter* exiſts, it will form new *obſtructions* in one place after another, till the whole of it is expended; or the heat of the weather ſo attenuates the humours and relaxes the veſſels, as to allow the former a free paſſage. Theſe repeated attacks are called *a fit of the gout*, in thoſe who are habituated to this diſeaſe, and are as it were of worn-out conſtitutions; by which they oftentimes are tormented, from the month of *October* (ſooner or later) till the beginning of the ſucceeding ſummer.

If it were aſked, in oppoſition to the above obſervation, why I am not confined with the *gout* till the month of May, at which time others begin to recover of it, I really cannot give any other reaſon for ſuch a deviation from what is cuſtomary to moſt people than *this*, that as digeſtion begins at that time to be more ſlowly performed, than it was during the cooler weather, the *morbifick acrimony* muſt be then generated in a greater degree in me; the ſecretions, likewiſe, that are neceſſary to our welfare in the ſummer not being as yet fully promoted. It is indeed true, that this reaſoning ſeems equally applicable to others as to myſelf; but then, ſome particular *organization* in the bodies of certain individuals, may incline them to be either differently affected by the ſame morbifick cauſe, or confine its operation to ſome one determined ſeaſon preferably to any other.

As ſoon as the painful ſtate of the diſeaſe is over, the *bark* and *aromaticks* ſhould be given together with *alkalies*; and whenever the tenderneſs

of

of the part will permit, frictions ought to be made with a *fleſh-bruſh* dipt in either a ſtrong *pickle* made with common ſalt and water applied blood-warm, or in *brandy* to which ſome ſpirit of *ſal ammoniacum* hath been added; by which ſeveral means, the joints will ſooner recover ſtrength, and the conſtitution be more ſpeedily braced. And when the patient can walk without much pain, or bear exerciſe on horſeback, and alſo the cold bath, theſe ſhould be uſed daily, unleſs the weather is unfavourable; in which caſe, he muſt at times keep himſelf in motion within doors; but ſtill without increaſing the pain or fatiguing him. It ought, indeed, to be acknowledged, that the *cold bath*, *walking* and *riding* are only practicable to thoſe, who have ſtill ſome firmneſs of conſtitution; but then *they* who are aged, and in a manner worn out by the diſeaſe, ſhould be carried abroad in a coach or chaiſe, and have general frictions made morning and evening; a double portion of which exerciſe, ought to be applied to the joints. And though they ſhould make ſpare meals, yet their *diet* and *drink*, ought to be nouriſhing, ſpicy and moderately ſpirituous. The above management is ſuch as I purſue in my own caſe, and with ſo great advantage, that after theſe ſo many repeated attacks of this diſeaſe, neither the ſtrength nor motion of my joints is at all impaired. Nor ſhould I be ſenſible that I ever had been liable to the gout, were it not for a tenderneſs in my feet, when I walk much.

I am confident, that the *gout* hath oftentimes been prevented in myſelf, by medicines which were taken when thoſe ſymptoms which commonly precede the fit were perceived; of which every perſon who hath been liable to that complaint, will be able to judge from his own experience, unleſs he was quite inattentive to whatever paſſed within

himſelf. And by uſing the ſame means occaſionally, I have not been confined for two days together by that diſorder, for the laſt ſix years; and verily believe, I might always prevent it, if I took the neceſſary care in time.

When medicines are taken with a preventive view, eight or ten drachms of the beſt *Peruvian bark*, and half an ounce of *ginger*, (both coarſely powdered) muſt be boiled in one pint and a half of water, till only half a pint remains. The liquor being ſtrained, and half an ounce of *magneſia* mixt with it, two or three common ſpoonfuls of this compoſition, ſhould be taken every ſecond hour, or in ſuch a manner, that the whole of it may be uſed in one day. This courſe I continue daily for the ſpace of a week, or till the weighty fulneſs that was perceived about the *epigaſtrick* and *hypogaſtrick regions* is removed; and the *magneſia* has no longer any purgative effect. But if *this powder* does not operate that way as I would have it, one or two drachms of *ſal cathartícum* are diſſolved in the mixture. I prefer this method of giving the bark, to any infuſion of it made with a *ſpirituous menſtruum*; becauſe a larger doſe may be taken, without diſordering the head or ſtomach. But if a *tincture* be deſired, equal parts of brandy and water, (or rather leſs of the ſpirit) are better ſuited to this purpoſe than *wine*, *which* of itſelf, being more or leſs *acid*, *neutralizes* the *alkaline ſalts* that are commonly added to ſuch compoſitions as are given with a view, either to prevent or ſhorten the fits of the *gout*. That quality, therefore, which *alkalies* poſſeſs of deſtroying *acidity*, ſhould not be weakened before they are uſed. And as both the *magneſia* and *alkaline ſalts* promote looſe ſtools, ſo long as any *acid* abounds in the firſt paſſages, I do not add *rhubarb* to the medicines; having always

ways found moſt benefit from *magneſia*, not only on account of its *alkaline virtue*, but alſo becauſe it proves more laxative in ſuch caſes. However, ſhould it be thought neceſſary to continue the uſe of the decoction, after the firſt paſſages have been cleared of *acidity*, a ſmall quantity of *rhubarb* may be mixt with the other materials, as a *tonick*, and likewiſe to prevent coſtiveneſs. If a *vomit* were given at the beginning of this *preſervative* courſe, ſo long a continuance in the uſe of *magneſia* will not be required; but the *bark* together with *aromaticks* and *alkaline ſalts* ſhould, notwithſtanding be taken daily for a week or longer. I ought to remark here, that *this* method of giving a gentle *emetick* and *bracing medicines* afterward, is to be preferred to ſo conſtant an uſe of magneſia in weakly and elderly people, who cannot bear much evacuation; but rather, that their conſtitutions ſhould be ſupported with warm ſtrengthening medicines, a nouriſhing and ſpicy diet and cordial drinks.

It may, probably, be objected, that many perſons have been relieved of the *gout*, by a *diet* of *milk*, *grain* and *ſuch things* as are remarkably *aceſcent*. But this regimen of itſelf, may not, perhaps, be of ſo much advantage, as thoſe impute to it, who had impaired their health by *indolence*, *gorging themſelves habitually with eating and drinking to exceſs*, *night carouſals*, *or other intemperances*. For as all *theſe* unreaſonable indulgencies muſt be abſtained from, when ſuch a courſe is undertaken, and the patients generally make moderate meals, keep good hours, and do not go abroad unleſs the weather be fair, it is no wonder if *thoſe* who became invalids from continued irregularities, ſhould enjoy better health, ſo long as theſe precautions are obſerved, than whilſt they lived in an intemperate and heedleſs manner. However, were the

like circumſpection attended to, my own experience aſſures me, that theſe ſalutary purpoſes would be more fully anſwered, and the patient's ſtrength alſo better ſupported by a diſcreet uſe of eaſily digeſted animal food, whether of fleſh or fiſh in their turns, provided they be not fat or oily; of ſuch vegetables likewiſe as have either an *alkaleſcent* or a neutral quality; and of diſtilled ſpirits, properly diluted with water. Beſides the other courſe diſagrees with many perſons; and ſome are not at all benefited by it. Yet ſhould the appetite be palled by too ſtrict a limitation in the way we recommend, though the variety to chuſe from is great, it may be beſt to allow a mixture of diet, on condition, that the aceſcent is not too much gone into. Though a certain portion of *acidity* in the ſtomach, may, perhaps, be neceſſary to the digeſtion of our aliments, by promoting ſome degree of fermentation, the exceſs of *it* ſhould be guarded againſt; and this is all I contend for. For allowing *it* to have been removed on certain occaſions by medicine and diet, it will yet be preſently generated anew, by indulging the patient with a ſmall mixture of bread or other aceſcent food.

Much has been ſaid by medical writers, of an *alkaline putreſcence* in the fluids; but, though I do not aſſert that this may not be induced in ſome degree by particular diſeaſes, or a long continuance in the uſe of powerful *alkalies*, yet I am of opinion, that ſuch a corruption in the humours can ſcarcely be generated, in a perſon who uſes proper exerciſe, even were he to live wholly on animal food, and without any mixture of vegetable productions, as the inhabitants of *Nova Zembla*, *Greenland* and ſome other countries are known to do, though their diet conſiſts altogether of fiſh and fleſh, which often-

oftentimes are in a highly putrid ſtate before they are eaten; and they drink the moſt rancid train oil freely *.

When acidity prevails, every man who had been liable to that acrimony, may with tolerable certainty judge thereof. But ſhould any doubts remain, he may preſently be convinced, whether the diſorder he perceives in his bowels, be owing to that cauſe or not, by taking three or four drachms of *magneſia*; for *this* will either purge him, if it meets an acid, or cauſe a belching or rolling of wind in the inteſtines; otherwiſe no ſuch effects will enſue. And whenever any one begins to uſe *that alkaline powder* in order to remove a ſuper-abounding acid, it ought to be taken daily, whilſt it has any operation, provided it does not purge him too much; and in the mean time every thing that is aceſcent ought to be abſtained from.

* An officer belonging to Colonel Montgomery's regiment, had the misfortune to be wounded and made priſoner by a party of Indians called *Wiandots*, when Colonel Grant was attacked near *Fort Du Queſne* in September 1757. Theſe ſavages conducted this gentleman to their own country, ſome hundreds of miles further back, where his life was ſpared by the relations of thoſe who had loſt ſome of their kindred in the above and other actions. He ſpent two winters with thoſe people, whoſe cuſtom it was to ſet out in large companies conſiſting of men, women and children in the month of September, in order to hunt in ſome more diſtant places; whence they did not return till the following April; ſo that ſeven or eight months were ſpent in thoſe excurſions. And during all this while, they lived wholly on the fleſh of ſuch animals as were killed without any ſalt, making likewiſe a very free uſe of bears oil in different ways. Yet not one of the party was ever ſick; and they all returned home fat and in high health. Beſides the above gentleman, many other Engliſhmen were priſoners among thoſe and other Indians, who alſo were employed in the like expeditions; and the diet agreed equally well with them all.

So

So long as we enjoy moderately good health, and eat and drink according to the cuſtomary manner, no other than an *acetous* acrimony can be generated in us; for that ſaponaceous and moſt uſeful humour the *bile*, can never be ſecreted to exceſs, unleſs the conſtitution were previouſly more or leſs diſordered; on which occaſion an acid often forms a corroſive mixture with the *gall*; and to ſuch a degree, ſometimes, that I have known the patient's linen to be deſtroyed by it, as if it had been ſprinkled with *aqua fortis* or *ſpirit of vitriol*.

Pure *bile* fuſes the fluids, but acids have a contrary effect. And ſeeing the greater part of our food and drink is commonly of the *acefcent* ſort, the acrimony we ſpeak of, cannot fail in being produced, when the ſtomach does not digeſt its contents with expedition, as unfortunately happens in very many people, who, nevertheleſs may not ail much at times, till that ſharp humour abounds, or ſome circumſtances concur to put it in action. It therefore appears, that acidity has its riſe in the ſtomach, whence it paſſes with the *chyle* to the *circulating fluids*. And as it may be daily but gradually thus introduced into *them*, *they* may in the end be thoroughly tainted with it; ſo that if the perſon's diet be not properly regulated, *this* will happen the oftener and in a greater degree, the more impaired the conſtitution becomes. Hence we in part ſee the reaſon why aged people and others who are much habituated to the *gout*, have long paroxyſms, with but ſhort intervals between them; nor does a day paſs, in which it can be ſaid they are intirely free from pain, when they walk or move about.

It is recommended by ſome, that gouty perſons ſhould uſe warm bathing; to go to bed early and lie

lie till late in the morning, and promote ſweats with ſome medicine or other, either in the fore-part of the night or before they riſe next day, even in the intervals between the fits. The cold bath is alſo adviſed; but then the patient is enjoined to go to bed immediately after, and ſweat plentifully. Such counſels, however, ſeem plainly contradictory. For, if it were meant to ſtrengthen the conſtitution with the cold bath, that intention will be fruſtrated by promoting ſweats, and relaxing him directly afterward. And, ſhould theſe exceſſive perſpirations be deſigned either to diſcharge the *morbifick* humours through the pores of the ſkin, or diſſolve any viſcidity that might exiſt in the fluids, according to the common way of ſpeaking, (which ſurely is not likely to be effected, by thus depriving the blood ſtill more of its thinner parts) the bathing juſt before theſe ſweats were promoted, was improper for both purpoſes. On the whole, ſuch ſorts of management are ſo far from promiſing any advantage, that they weaken rather than brace the conſtitution, from which latter alone, a recovery, or at leaſt an abatement of that diſtemper, can with reaſon be expected. And therefore, a general warm bathing is wholly to be condemned, though a well adapted local one, may be proper to relax the contractions that may have happened in particular parts, after the fit, or even during the painful ſtate of it, in order to induce a ſoft ſwelling, by cauſing the fluids to accumulate in the cellular membrane.

The perſon therefore, who wiſhes to bring about ſo deſirable an end, (and who would not wiſh it, that has endured the tortures of the gout) ſhould exerciſe himſelf daily on horſeback, as well as by walking, when the weather and his ſtrength will permit; and if the ſeaſon be ſo unfavourable that

he

he cannot go abroad with ſafety, ſome means muſt be deviſed for keeping him in action within doors; for ſcarcely any thing can have worſe conſequences than indolence, in the intervals between the fits. The cold bath alſo ſhould be uſed daily throughout the ſummer, by plunging headlong into ſalt water, but not out of the perſon's depth, even though he can ſwim, for fear of the cramp, to which gouty people are remarkably liable. If the ſea be not near, ſo much common ſalt ſhould be diſſolved in freſh water, as will bring it to an equal degree of ſaltneſs and weight with that of the ſea; and then two or more pailfuls of this ſhould be poured over his head as he ſits in a large veſſel one after another, as quickly as this can be done, only allowing him time to breathe between each affuſion. But this ſhould never be practiſed immediately after a meal, when the belly is bound, or if the patient had juſt before been heated with exerciſe. He ought to go to bed early and riſe ſoon in the morning, when the weather is good, but ſtill he ſhould not walk in the dew. As to the diet and drink which I have found to be beſt in my own caſe, ſome notice hath already been taken of them. The former, therefore, conſiſts of ſuch articles as in their own natures have a tendency to *alkaleſcence*, when they undergo ſome degree of putrefaction. Such are the ſeveral parts of all animals we uſe in food, (excepting milk) whether of the land or water; of vegetables likewiſe which when putrified, acquire a rank and offenſive ſmell; as cabbages and other plants that have either abiting bitteriſh taſte, or an aromatick quality. It may, indeed, be true, that many of theſe have not *alkaleſcent* properties; but then they will aſſiſt digeſtion, and ſtrengthen the bowels, by their ſtimulating and heating qualities, without promoting *acidity*.

In

In weakly conſtitutions, *acidity* will be generated, by ſweet and farinaceous preparations of every ſort. The ſame may be ſaid of all plants that have a *ſacharine* taſte, *ſummer fruits* of every kind, that contain either ſweet or ſubacid juices; all things in which ſugar or honey is an ingredient; every ſort of fermented liquor, as wine, beer, *&c.* and whatever is fat, greaſy or oily ſhould likewiſe be abſtained from. Yet I would not be underſtood, that *aromatick* oils which are procured by diſtillation muſt be included in the above prohibition. As to the moſt proper drink, it may conſiſt, for youthful or ſtrong ſubjects, who incline to an inflammatory diatheſis, of ſoft water alone; but for thoſe who are aged, or otherwiſe of an infirm conſtitution, an eighth or a tenth part of brandy or rum may be mixt with the water they drink. Beſides, when the ſtomach ſuffers from *acidity*, a pint or more of *lime-water* may be drank daily till that is removed; but then, either a ſmall quantity of diſtilled ſpirit ſhould be added to it, or ſome ginger, or ſaſafras bark coarſely powdered, muſt be infuſed with it, leſt it ſhould prove too cold for the ſtomach by itſelf.

I would further adviſe the gouty patient, to be moderate in eating and drinking; for nothing debilitates the ſtomach more, than its being daily overſtretched by large quantities, even of thoſe things which in other reſpects might be proper for him. Nay drinking too plentifully, of the pureſt water, will injure that organ, merely by its weight, weakening the ſpring of its muſcular fibres.

Should it be ſaid, that I have ſuppoſed this *crux medicorum*, to ariſe from a cauſe, which may be judged inadequate to the production of a diſorder, that hitherto hath been deemed incurable, I would anſwer, by giving it as my firm opinion founded

on

on many years experience, that ſuch diſeaſes as do not proceed from a contagious air, depend on more ſimple principles, than is commonly thought. What may be the ſpecifick qualities of thoſe different *miaſmata*, which afflict manſtind with ſo great a variety of communicable diſtempers, as we ſometimes are liable to, and only for once, I do not pretend to know. But ſurely, it ſeems needleſs to bewilder ourſelves always with *myſterious conjectures*, in ſpeaking either of the remote or immediate cauſes of many diſeaſes, which oftentimes would be more cognizable, did we but attend to plain reaſon. And certainly, nothing produces more various or painful and dangerous complaints, than an abounding *acid*, either by itſelf or when mixt with the bile; whether it lies in the firſt paſſages, or paſſes thence to the blood.

Beſides, as long as we enjoy any tolerable degree of health, an *acid* is the only acrimony to which we can be liable, from our ordinary manner of living. Therefore when digeſtion is ſlowly or improperly performed, few or none of thoſe to whom this happens, eſcape without being troubled with acidity in ſome degree; and for that reaſon, whilſt they who are afflicted with the *gout*, live in ſo negligent a manner, by eating and drinking of whatever is ſet before them, more or leſs of the acrimony we ſpeak of, muſt conſtantly take place in them. We accordingly find, that a *ſprain*, *bruiſe* or too great a *compreſſion*, will at all times bring the *gout* into the part that ſuffers by ſuch accidents; and it will be well, if it does not proceed further. So long then as a perſon lives in the random manner we juſt now mentioned, and eats and drinks at large, he can ſcarcely expect the *gout* ſhould be prevented. Theſe things however, have been ſpoken of before in a general way; but ſo much depends

pends on their being obſerved, that it is not amiſs to repeat them.

Another difficulty againſt our accompliſhing *this* great end, ariſes from the inactive condition of the ſtomach itſelf, whence are derived all the miſchiefs that follow. But to remedy *this* defect is not ſo much in our power, more eſpecially if it were of long ſtanding. For as that part is wholly *membranous*, and hangs, as it were, looſely within the body, unſupported by ſurrounding *muſcles*, it will not be eaſy to recover its tone when once *that* has been loſt. And if *this* cannot be effected by briſk riding, together with a cloſe application to the medicines we propoſed, to which mineral acids or filings of iron ſhould alſo be added, I know not what will do it. One thing, however, will always be in the patient's power, which is, that he may prevent the generation of an abounding *acid*, by ſteadily uſing a proper diet; when I am morally certain, he will not be quite ſo liable to the gout; nay I will ſay more, he will feel but little inconveniency from it for the future.

It ought to have been taken notice of before, that in patients who uſually were confined ſeveral weeks and ſometimes for months with the *gout* or *rheumatiſm*, I have frequently removed theſe painful diſeaſes at once, by giving ſix or ſeven grains of *Plummer*'s *ethiops*, and about ſixteen grains of *gummi guajacum* made into a bolus with any ſort of conſerve, whereby a ſurpriſingly great quantity of *acidity* mixt with bile, is always diſcharged both ways; and the patient ſweating profuſely at the ſame time as well as afterwards, was left free from pain. Whilſt the above medicine is working, a warm bed-pan ſhould be carefully conveyed to the perſon under the covering, and he ought to be often ſupplied with ſmall draughts of warm broth made

made with lean meat, in which ſome aromatick herbs or a few grains of pepper were boiled. But he ſhould keep his bed at leaſt for the ſpace of forty-eight hours after theſe operations; more eſpecially if the weather be cold. As this medicine operates roughly both upwards and downwards, and alſo profuſely by perſpiration, I do not adviſe it for thoſe who are weakly; nor even to the ſtrongeſt perſons during the ſummer, without they take the *bark* and uſe the cold bath afterward, in order to prevent thoſe melting ſweats, to which they would be liable, from the exceſſive dilatation of the *perſpiratory organs* occaſioned by theſe means, ſo long as the warm weather continues.

The above obſervations aroſe from a repeated and painful experience of the *gout* in myſelf; and they were further confirmed to me, by comparing my own caſe with others who were fellow-ſufferers from that diſeaſe. It will readily occur to an experienced reader, that ſo free an uſe of *magneſia*, which promotes plentiful ſtools for a number of ſucceſſive days, with the view either of ſhortening the paroxyſm or preventing a return of the *gout*, is not at all applicable to thoſe who are weak, and cannot undergo ſuch evacuations, though they may very well bear the more inert *alkalies*, joined with cordial and *tonick* medicines, as well as a nutritive and ſpicy diet, and a reaſonably free uſe of ſpirituous drink; for aged people are thoſe who are of very debilitated habits, and ought to be well ſupported.

Of late, ſome very eminent phyſicians, have ſuppoſed the gout to proceed from unnatural *excitations of the nervous power*, independant on any pre-exiſting morbifick taint in the fluids. I will not take upon me to ſay they are miſtaken; though it ſeems from *this* ſort of reaſoning, that a violently painful

painful diſeaſe may be brought on, without any internal acrimony exaſperating the nervous ſyſtem by its irritation. Yet, why any diſorderly affections of the nerves, ſhould induce the *gout* in individual perſons, rather than any other complaint, I ſee no reaſon. were it ſaid, that this *hypotheſis* is applicable to thoſe only who have been habituated to the diſeaſe, I will not wholly deny the inference; for I have really known it to be brought on by ſuch a cauſe. And the reaſon is, that *gouty* ſubjects, who live at random, being ſeldom free from a *fomes*, which inclines them to *that* diſorder, whenever any thing happens to obſtruct a free and equal diſtribution of the fluids; as violent paſſions of the mind, by exaſperating the *nervous ſyſtem*, and acting ſtrongly as a *ſpaſm*, are well known to do. Yet I would aſk, what brought on the firſt attack of this diſeaſe when no ſuch cauſe contributed thereto? Beſides, we are certain, that thoſe who are liable to the gout, are attacked with it frquently, when no cauſe from without can at all be referred to.

The caſe of the *gouty apothecary* is well remembered by many, as it was publiſhed in ſeveral news-papers and magazines. This man was ſeized with moſt excruciating pains in his feet; which aſcended by degrees till they reached the *ſtomach*, and then cauſed repeated vomitings of a moſt acrid humour, which freed him from all his complaints.

Though it happens but ſeldom, that acute diſeaſes can be truſted to the conduct of nature alone, yet in *this one* inſtance, ſhe acted with all the judgement (ſhall I call it?) that her warmeſt advocates commonly impute to her, in diſcharging the *morbifick* matter at once; which elſe might have confined the patient for a long time. But if I, or any other perſon who is liable to the *gout*, always perceives himſelf more or leſs diſordered at the

ſtomach and in the bowels, for ſeveral days before the pain fixes, and provided the proper means be uſed to free the firſt paſſages of the offending matter in time, the fit ſhall thereby be prevented, as I have often experienced in myſelf, the queſtion with me is, how this could be, unleſs the noxious humours were diſcharged by the method that was then purſued. Nor do I know, that any inordinate agitation of the mind, ever contributed to the gout in myſelf.

I think we cannot be much miſtaken, in aſcribing the gout, to an obſtruction formed in the *capillary canals*, by a *viſcid pungent humour*, which cauſes a particular ſort of inflammation with exceſſive pain, owing to the *acrimonious matter* irritating the *nervous ſyſtem*. And, indeed, thoſe gentlemen who are of a different opinion, ſeem to give *this* point up, by granting, that the *acid acrimony*, which at ſuch times ſuperabounds in the *alimentary canal*, ſhould be corrected.

Their reaſoning againſt the exiſtence of a *morbifick* matter, ſeems chiefly founded, on the ſudden ſhiftings of the pain from one place to another; which, according to *them*, muſt be owing to ſome irregular affections of the *nervous power*, rather than any *dyſeraſis* in the fluids: but whence the *nerves* ſhould be thus diſordered, they have not ſaid, except in one inſtance of the paſſions being greatly excited, which we know produces many other dangerous effects ſometimes. It however is true, that the regular *gout* moſt frequently attacks when the perſon is ſleeping ſoundly in a warm bed; the mind being then wholly at reſt; and, therefore, no ſuch cauſe could poſſibly contribute to it at that time. And could *this* really induce the *gout*, independent of any other cauſe, I do not ſee, how many people could have a chance to recover of the diſeaſe,

diſeaſe, as during it, they are more fretful and liable to ſtrong paſſions or violent *excitements of the nervous power* from ſlight cauſes, than at other times, from the exceſs of pain and preſent extraordinary *irritability of the nerves*. Farther, what we daily ſee of the ſudden removal of the pain from one part to another, in *hyſterical* and *hypochondriacal* patients, is as applicable to the *gout*. And were *thoſe* who deny a *morbifick* affection of the fluids to be the cauſe of the latter diſorder to conſider, that the ſhifting of the pain is very rarely made inſtantaneouſly, when the diſeaſe is regular; for it commonly requires ſeveral hours to bring about a freſh attack, either in the correſponding joint of the oppoſite limb, or in ſome other place; they would find no great difficulty in judging how theſe things ſhould be. For allowing it to be only half an hour from the time the pain ceaſed in one part, till it falls on another, the pulſe then beating ſeventy or more times in a minute, which exceeds two thouſand pulſations in half an hour, *theſe* are fully ſufficient, for conveying the groſſer fluids throughout the ſyſtem, ſo far as the veſſels are eaſily permeable. But it really ſeldom happens, that the pains ſhift from place to place in ſo ſhort a time as half an hour; nor is it to be ſuppoſed, that it was preciſely the ſame portion of *acrid matter*, which occaſioned all the pains that were endured during a tedious fit of the *gout*. For *one joint* not being ſufficient to admit or retain the whole of this, *another* muſt receive ſome part thereof; and thus repeated attacks will be made on different places, ſo long as any of the *arthritick acrimony* remains in the fluids to prolong the complaint. Hence, the miſerable patient may be tormented, perhaps, for ſeveral months; being all this while in the moſt anxious ſtate of ſuſpenſe, even while he enjoys an interval of eaſe, between the hopes

of his ſufferings being at an end, and the dread of another renewal of the pain ſomewhere.

Further, the criſes that happened repeatedly in the *gout* to Mr. *Rook*, in my opinion, put the exiſtence of a *morbifick matter* in that diſeaſe, paſt all doubts. One inſtance of which is as follows, "This patient having a ſevere fit of the gout in "his heels and ankles for twelve days, the pains "became more violent than any he had ever ex- "perienced, and almoſt drove him mad. During "the height of this excruciating torment, he felt "the pains in his heels and ankles fly in an inſtant "to the calfs of his legs; in half a minute *they* "aroſe from thence to his thighs; and in the ſpace "of one minute more, they paſſed to the abdo- "men, whence, after giving him one pang in his "bowels, they aſcended to the ſtomach; when he "inſtantly threw up a pint and a half of a greeniſh "*aqueous* liquor, which was ſo corroſive, that he "compared it to the ſtrongeſt *mineral acid*, and "then the pain and the fit ended." See Medical Obſervations publiſhed by a ſociety of gentlemen in London in the year 1757. *

* If it were granted, that *anger* when excited to a violent degree, is capable of inducing the *gout*, as well as ſome other more dangerous diſeaſes, it ſhould ſeem, that the oppoſite paſſion of *fear*, has quite contrary effects. For in the year 1738, when an inſurrection was made by a party of negroes in this province, who committed ſeveral murders, and burnt many houſes, a perſon being confined with the *gout*, was told, that they were advancing, and but a little way from his habitation. It being then near night, he got up immediately, and together with his family, retired to a ſwampy thicket, where they continued during the whole night. His houſes were, indeed, deſtroyed; but then *this* amends was made him for it, that the gout inſtantly left him; nor was he ever afterwards liable to it; ſo thorough a change was thereby wrought on his conſtitution, though the contrary might rather have been expected, as *fear* and *ſurprize* in an exceſſive degree, were likely to depreſs rather than animate the vital and natural actions.

Should

Should any one doubt, whether this *acrimonious* matter was not, indeed, the remote cauſe of the *gout*; as well as of the pains that were perceived in different parts, during its paſſing from the lower extremities towards the *ſtomach*, I would aſk whence it happened that all the diſtreſſing ſymptoms ceaſed, when the circulating fluids and firſt paſſages were freed of this highly irritating humour? Had *they* been owing, merely to an affection of the *nervous ſyſtem*, independent on the *ſtimulus* of ſomewhat very *acrimonious*, with which the fluids had been tainted, I can ſee no reaſon, why the complaints ſhould not have continued, after that *fluid* and the *primæ viæ* were cleared of the pungent *aceteus* acrimony.

But it may be thought by *thoſe*, who favour the doctrine we oppoſe, that ſuch different *metaſtaſes* could not have happened ſo ſuddenly, in the courſe of circulation; and therefore, that they muſt have been owing to various excitements of the *vis nervea*. I have indeed known the *gout* to be brought on, by a perſon being ſuddenly thrown into a violent rage of anger; but then the *morbifick* cauſe pre-exiſting in *this* patient, it was now brought into action by paſſion, which, by exciting the nervous power immoderately, induced a ſpaſmodick conſtriction on the minute veſſels, whence an obſtruction was formed in them; for no one will ſay, that had the agitation of mind been ever ſo great, an *acid acrimony* could be immediately generated to a great degree; and I never knew a *gouty* perſon in whom a humour of this ſort did not more or leſs prevail.

Let us for a moment loſe ſight of *morbifick* excitements, of the *vis nervea*, and only conſider the exertion of *that* power on the *ſanguiferous canals*, and other muſcular membranes; whence an irre-

gular diſtribution of the blood muſt enſue; and the latter ſuppoſition being more cognizable to us than the former, it ought, in my opinion, to have the preference. When therefore the coats of the veſſels are *ſpaſmodically* affected, the fluids will thereby be repelled from the exterior and extreme parts, as happened in Mr. *Rock*'s caſe; whereby the obſtructing humours being diſlodged, were made to paſs through the *lateral* branches, and thus getting into the veins, they were ſoon conveyed by the *vena portarum* to the liver; where being ſecreted from the common maſs, they were then diſcharged by the common ducts into the ſtomach. How pains ſhould be excited by this very ſharp humour, as it came into contact with any acutely ſenſible parts in its progreſs upwards, is not difficult to be conceived.

With a gentle ſouth-weſt or north-eaſt wind, the weather oftentimes is very foggy and moiſt for ſeveral days together throughout the winter; during which, all things abroad and within doors are thoroughly damped; ſo that furniture preſently becomes mouldy or ruſty if it be not often wiped dry. The immediate effects of ſuch a ſeaſon are, a laxity of the ſolids in general, with a liſtleſſneſs and inactivity both of the body and mind. The fluids alſo are much diluted, not only becauſe *perſpiration* is now abated and much moiſture is imbibed; but likewiſe, becauſe *they* undergo ſome degree of attenuation, owing to the compreſſive force of the veſſels being diminiſhed, as having ſuffered ſomewhat of an *atonia* from relaxation.

The lungs and the ſeveral parts leading to them, ſeem now to be affected in a particular manner; either becauſe they are exceedingly relaxed, as being more immediately expoſed to the *humid air*, or the fluids are there ſo diluted with the moiſture

which

which is imbibed from without, that for one or both reaſons, *ſerous obſtructions* may eaſily be formed in the reſpiratory paſſages. Hence few eſcape *coryzas*, *hoarſeneſſes*, *coughs*, *enlargements* of the *uvula*, *tonſils* or *maxillary glands*, which then are pale, rather than of a red or highly inflamed colour; a proof, that the *ſerous humours* are accumulated in the *pituitary membranes* and *mucous glands*. *Theſe* complaints, however, may be moſt common, after the weather changes; for the bad effects even of the worſt ſeaſon, do not always ſhew themſelves immediately. And in this we ſpeak of, the humours may circulate freely, ſo long as the veſſels continue lax and paſſable; but whenever their extreme branches come to be conſtricted by cooler *air*, at the time they were fully diſtended with fluids, which moved with but a ſmall *momentum*, it is no wonder if the above complaints ſhould then be common.

So long as the weather is clear and cold, the *yaws* and *lame diſtemper* (as the latter is called) make but little progreſs on thoſe who are liable to them. *Ringworms* likewiſe, together with other ſlight diſorders of the ſkin, will not be very troubleſome, becauſe the acrimony on which they depend either does not exiſt, or but in a ſmall degree; or the outward parts may be ſo braced and conſtricted, that, if the expreſſion be allowed, the ſkin will not then permit ſuch ſharp humours to be depoſited on it.

SECTION IV.

Of the EFFECTS of the WEATHER in the SPRING.

MEDIUMS of the THERMOMETER and RAIN for Ten Years.

Months	Ther.	Rain
March	53	1.89
April	63	2.50

AS was mentioned before, the ordinary diſtribution of the months into ſeaſons, does not pleaſe me. For certain it is, that taking the whole of the month of March together, with reſpect to the temperature and qualities of the *air*, it does not differ much, from *ſome* of thoſe that are called winter months. It is, however, retained here as belonging to the ſpring, though the medium of the thermometer be ten degrees leſs, than it is in April. But, although the weather be for the moſt part warmer in March, than it is in the preceding month, it ſtill is changeable; as being intermixt with cold, windy and warm days; in which the mercury may ſometimes riſe nearly to the eightieth degree of the thermometer, and fall in a few days

to

to the fortieth; the contrary will again happen in a ſhort ſpace of time; and as oppoſite a change may as ſuddenly ſucceed this. By ſuch ſudden and great variations in the ſtate of the atmoſphere, our ſolids are made to undergo ſo quick and frequent conſtrictions and relaxations, as the fluids likewiſe do of condenſation and expanſion, that an irregular circulation, or ſome diſorder in the ſecretions and excretions may eaſily be induced. But as the heat of the weather, hath not been either ſo great or conſtant as yet, to cauſe a general laxneſs of the conſtitution, the internal veſſels are ſtill ſo braced, that they do not permit the ſecretions to increaſe in proportion, when the fluids happen to be unnaturally repelled into the viſcera, by a *ſpaſmodical* contraction of the outward parts; whether *this* might happen from catching cold, or ſome other *morbifick* cauſe. The belly therefore, moſt commonly continues bound in fevers; and for that reaſon, and perhaps *that* alone, the complaints which were mentioned in the preceding ſection, may not only appear in March, but be even more frequent than they were during the winter; owing to the many interchanges of heat and cold, and the increaſing weakneſs and *irritability* of the ſolids. And, as theſe effects, may poſſibly take place in a higher degree in the lungs and parts leading to them, as being more immediately expoſed to the effects of the *air*, *pleuriſies*, *peripneumonies*, *quinſies*, and *catarrhous* fevers are oftentimes epidemick in March; and they likewiſe may continue throughout the month of April; but with a leſs degree of inflammation. And, when one perſon in a family ſickens, and the diſeaſe cannot be removed in a few days, nothing is more common, than for ſome of the attendants to be ſeized nearly in the ſame way. Hence theſe diſ-

tempers

tempers are thought to be contagious; whereas this is owing, to a ſort of ſameneſs of conſtitution that now prevails, and prediſpoſes thoſe who happen to be ſeized with fevers, to nearly the ſame complaints. For they who depart from their ſtated manner of living, are moſt in danger of diſeaſes at all times.

For example, thoſe who undertake the office of nurſing ſick perſons, may often be obliged to go out of a warm room into the cold air at all hours; not to mention that they are deprived of regular ſleep. Theſe are cauſes ſufficient, to diſturb the *natural actions*, whereby the *vital* ones muſt be diſordered in proportion. And as ſuch encroachments on our ordinary habits, are not without danger at all ſeaſons, ſo the like means will render us as ſuſceptible, of whatever other diſeaſes may be *epidemick*, at any different time of the year, as we now are to the *pleuriſy*, *peripneumony*, or *quinſy*.

When the patient had a cough and ſpitting, before he was ſeized with a *peripneumony* at this time, the expectoration generally will be pretty free on the ſecond or third day of that diſeaſe; provided care had been taken; and *it* alſo will be more plentiful, than it was in the like diſorder during the three preceding months. The ſick likewiſe are more diſpoſed to ſweat in fevers, and the belly will be more eaſily looſened now than in the foregoing ſeaſon. The blood too being of a laxer conſiſtence, ſhews ſigns of leſs inflammation; for for though a *pellicle* of coagulable lymph may ſtill appear, yet *this* will be thinner and not ſo tough as it was in January; the urine alſo depoſites a much larger ſediment, and is higher coloured than it was when the whether was more regularly cold.

Youths are more liable to fevers in March and April, than at any other time of the year. And though

though *theſe* diſorders are moſtly of the continued or remitting *catarrhal* ſort at firſt, they will yet become *quotidian intermittents* in a few days, if properly managed; elſe *they* may continue till the ſeventh or longer; and a *delirium*, *bleeding* from the noſe or both may be frequent in them. During theſe months theſe two ſymptoms are not uncommon in *peripneumonies*, or the *peripneumonick* ſtages of *pleuriſies*. But, though a *hemorrhage* of *this* ſort, is thought by ſome writers not to be a favourable ſign in diſeaſes of the lungs, I have ſeen excellent effects from it, when the patient had a *ſtupor* or *delirium*; and on the contrary, ſome were loſt, by the bleeding being injudiciouſly ſtopt, before the veſſels were permitted to empty themſelves ſufficiently.

Children between three and ſeven years of age, are ſometimes ſeized with fevers, in which the head and *nervous ſyſtem* are ſo remarkably affected, that *ſtupors* or *convulſions* preſently enſue. During the *epileptick attacks*, and for ſome time after, the heat is greater than I ever found it in any other diſeaſe; the ſick being at the ſame time drenched with an almoſt ſcalding ſweat But when the fever ceaſes, ſo great is the *atonia*, that the patients are cold and conſtantly bathed with clammy ſweats; which, however, will diſappear gradually, as ſtrength is regained. Theſe certainly are ſigns of extreme laxity in the ſolids, as well as of *colliquation* in the fluids; and the ſame are likewiſe evident, at leaſt locally, even during the fever. For notwithſtanding the *tonick* conſtrictions that ſeem to prevail on all the external *veſſels* and *muſcular parts*, and the exceſſive excitement of the *nervous power* in time of the convulſive attacks, the ſtools will then be watery and very large; having the appearance and offenſive

offenſive ſmell of water, in which bloody putrid fleſh had been waſhed.

This fever does not intermit; for though the worſt ſymptoms may abate at times, a *quick pulſe together with great heat about the head, breaſt, and abdomen, ſickneſs and head-ache* will ſtill remain to ſuch a degree, as, on other occaſions, would indicate a pretty high fever. Yet, theſe opportunities muſt be embraced for giving the *bark* and oak bark made in a decoction with water, to which a little *alum* or ſpirit of vitriol, oil of cinnamon, cloves, or that of mint ought to be added; and the patient ſhould often ſip a little *claret* or *red port wine* mixt with an infuſion of *cinamon*, *cloves* and *oak bark* made in water. Wine alſo, and half a teaſpoonful of the powder of *cinamon* ſhould be added to ſo much gruel or panado as is given at once. But it is not to be underſtood that, though the free uſe of wine is recommended, the patient muſt take it in ſuch quantities, as will intoxicate him. For ſuch exceſſes are always ſucceeded by a proportional *atonia*, and depreſſion in the *vital actions*.

By purſuing the above method, the ſucceeding fevers will be moderated; and diſtinct intermiſſions being at laſt obtained, the diſeaſe then may be eaſily removed. Nevertheleſs, the above medicines muſt be given for a week or more after the fever ceaſes; or rather more or leſs of it ſhould be taken daily, till the patient's ſtrength is fully recruited. And indeed, this rule ſhould be obſerved in uſing the *bark* at all times, more eſpecially during a warm ſeaſon.

This is one of thoſe fevers, in which, whoever waits for a calm pulſe and other ſigns of a clear intermiſſion, before he ventures to give the *bark*, may ſometimes loſe his patient. For the *medicine*

is

is a ſafe one, and the danger great. Were better opportunities to be expected, it might be right to delay it; but the diſeaſe affords little time for deliberation; and the next increaſe of the ſymptoms, may put an end to our hopes.

A *delirium* and *violent anxiety* are common to this diſorder; and though theſe ſymptoms are indeed frequent in other fevers, yet in *this*, they may be greatly aggravated, more eſpecially the latter, by an exceſſive flatulent diſtention of the inteſtines; owing to the *air* being highly rarefied there, by the violent heat within. But whether ſo or not, in order to prevent *convulſions*, or ſuch a *ſtifling anxiety* as might ſoon deſtroy the patient, the bowels muſt be quickly freed from *that flatulency*, by increaſing their contractile force with ſtimulating *tonick* and *aromatick clyſters* made ſtyptick, in order to enable them, not only to expel the expanded *air*, but alſo to check the exuberant excretions, by conſtringing the internal *ſecreting* canals. And to theſe alum or ſpirit of vitriol ſhould be added. But as the ſame inflation will again enſue, provided the fever continues, recourſe muſt ſtill be had to the like injections. Or if this method is not approved, for I have known it to be objected againſt, becauſe of the large liquid ſtools the patient already had, though the injections were intended to abate them, a *clyſter pipe* may every now and then be introduced into the anus; through which the *air* will paſs; but then the ſecretions ſtill going on in the ſame exceſſive manner, the purging will ſoon exhauſt the patient; unleſs it can be reſtrained in time.

The neceſſity for *bliſtering* different places, as well as for a *cordial regimen*, both as to *medicine* and *diet* during the fever, and applying flannels ſqueezed out of ſpirituous embrocations to the abdomen is very apparent. And after the fever ceaſes,

ceaſes, general frictions ſhould be made in order to brace the external veſſels and others that are connected with theſe. For, how neceſſary theſe things are for the preſent as well as the time to come, will plainly appear, from the frequent *ſighings*, *cold ſweats*, *drowſineſs*, *deafneſs*, weakneſs of the ſight, and other ſigns of extreme debility, which remain long after the diſeaſe ceaſes. I have indeed known children to continue puny, for ſeveral years after theſe diſorders; others became ſo liable to complaints of the *lungs* or *lower viſcera*, that they at laſt ſunk under them.

When the weather is warm at this time, women and weakly men, have fevers with ſome degree of cough and pain in the ſide or breaſt, but they remit from the beginning; and in a few days end in quotidians, in which much bile is ſometimes diſcharged upwards at the beginning of the paroxyſms; more eſpecially when the belly is bound; but in that reſpect, a coſtiveneſs is not ſo frequent in fevers as it was earlier in the ſpring; and the patients may be more eaſily looſened when this is neceſſary, as hath been ſaid.

The gout and rheumatiſm, ſerous or inflammatory quinſies, and likewiſe the *eryſipelas* ſtill appear; the latter, in particular, is oftener ſeen in theſe months, than at any other time of the year. In general thoſe who abound with acidity, are moſt liable to the laſt mentioned complaint, which therefore is moſt common to women, as colicks likewiſe are; owing to the ſame acetous humour, more eſpecially when the menſes are either ſtopt or flow too ſparingly. For theſe things depend on one general cauſe. The *eſſera* alſo will not be unfrequent, but it happens moſtly in the firſt attacks of intermitting fevers; though it may be very troubleſome without any fever at all accompanying it.

it. The chicken pox uſually appears in March or April; and it may continue in a ſcattering manner till the end of June; but of this ſlight diſeaſe it is needleſs to ſay much, as it only requires common care after the eruption; though ſhould the fever be high before that is accompliſhed, in caſe of coſtiveneſs, gentle laxatives joined with mild diaphoreticks will be required.

Formerly the ſcarlet fever uſed to appear amongſt our vernal diſeaſes; but whether as an epidemick, or it was brought to us from other parts, I cannot ſay. But, as it has not occurred in the courſe of my practice for eighteen years paſt till lately, I believe it not to be a diſeaſe of this climate.

A complicated and very acute fever appeared here in the month of October 1770, which was ſaid to have paſſed hither from the province of *Georgia*, where many people died of it. It for the moſt part commenced with more or leſs of *rigor*; and afterwards was attended with alternate chills and fluſhings, whilſt the inflammation was in its progreſs; and when this had paſſed its height and was on the decline; the fever remitted towards morning and continued more moderate throughout the day; but it increaſed with a redoubled degree of violence before night; during which, the patients, when ſlumbering, were exceedingly diſtreſſed with alarming dreams; from which it required the conſtant attention of thoſe who had them in charge, to awaken them, in order to prevent convulſions, which ſometimes enſued. In this fever, the quinſy generally appeared at once, with great inflammation of the *velum*, *uvula* and *tonſils*; and it quickly ſpread to the *euſtachian tube*, and in thoſe who recovered (as moſt of them did,) the inflammation extended from the throat, to the *alæ naſi*; which ſoon became ulcerated; and a vaſt

vaſt diſcharge (ſometimes of a fetid ſanies) iſſued from the noſtrils; at which time the voice was hoarſe indiſtinct and uttered in a ſnuffling manner. This was the moſt happy turn the inflammation could take; for thoſe in whom it ſpread downwards to the *glottis* univerſally died. The tongue, in many, was greatly ſwelled and extended, inſomuch, that, as it could not be contained within the jaws, it hung down on the chin, for ſeveral days together. Towards the root of this organ of ſpeech, the *papillæ* were ſo enlarged, that innumerable pimples appeared; and all the other parts within the throat, ſo far as could be ſeen, were often covered, as it were, with one continued *ulcer*; which was either of a bright *pearl* or duſky brown colour.

The gargariſms I uſed in ſuch caſes, were of the moſt powerful *antiſeptick* kind; as decoctions of *peruvian* and oak bark with a ſmall proportion of *ſerpentaria* boiled in water, to which red *port wine*, *tincture* of *myrrh* or *brandy* were added, as one or the other ſeemed neceſſary; and they likewiſe were pretty ſtrongly acidulated with *ſpirit of vitriol* or *alum*; nor were theſe *mineral acids* ever omitted in a larger or leſs proportion according to the caſe. Half a ſpoonful of ſome ſuch compoſition as the above, was directed to be ſwallowed often by way of gargariſm; and beſides, the ulcers when crude and foul, were frequently cleanſed, either with a ſwab made with the threads of ſoft well worn linen, or a ſoft ſponge fixt on the end of a probe, dipt in a ſtronger decoction of the *bark* ſtill more acidulated: And, whether one or the other of theſe contrivances is uſed for cleanſing the ulcers, it ſhould be cleared of *pus* and ſloughs by waſhing, before it is applied again.

At

At the beginning of this inflammation, blistering acroſs the throat, and the back part of the neck oppoſite to it, and receiving the ſteams of hot water and vinegar, or of the latter alone, frequently by inſpiration, was of eminent ſervice; and when the patient was too young to receive theſe ſteams in the common way, a baſon with warm water and vinegar ſhould conſtantly be held near his mouth and noſe; and the ſame ought to be done even for adults, when they are aſleep; that the antiſeptick vapour might the more frequently be received; whereby, I have ſometimes thought the inflammation was diverted from paſſing to the *trachea*, being as it were thus invited to take a ſafer courſe forwards.

It was ſaid, that the decoction of bark was uſed by way of gargariſm, even during the greateſt degree of fever, when the ulcerations were numerous and ill conditioned; but as ſoon as remiſſions happened, that medicine was given more freely, as well as in a more effectual manner, by adding ſome of its fine powder to the mixture. When the inflammation appeared great at the beginning of the diſeaſe, ſome blood was uſually taken away from ſtrong ſubjects; and the belly was conſtantly kept moderately looſe throughout the inflammatory ſtage; nor afterwards was it permitted to be long bound. Other practitioners have told me, that in one or two inſtances, the *fauces* appeared pale and flaccid from the firſt; the pulſe being low and depreſſed, and the proſtration of ſtrength remarkably ſudden and great. But I cannot ſay, among the very many caſes which were under my inſpection, that I ever met with one, who did not require the *antiphlogiſtick* method, during the firſt ſtage of this very acute *angina*. Indeed, I was called in conſultation for two patients, towards the fourth or

fifth day of the diſeaſe, in whom the putrefaction was ſo great, that there was no enduring the room from the ſtench; and in leſs than thirty ſix hours, the external parts round the throat, became black and completely *ſphacelated*; ſo that thoſe unhappy children preſently died.

Hitherto, we have ſpoken of the *quinſy* only; but very few who took that diſeaſe eſcaped without having both *ſcarlet* and *miliary* eruptions; which, generally appeared on the ſecond or third day of the fever. And it was remarkable, that they who had the two latter complaints to a high degree, for the moſt part, ſuffered leſs from the *angina*. On the contrary, the fever was exceedingly high, and the inflammation in the throat great, in thoſe who had *vomitings* and *large watery ſtools*; which, as ſhould ſeem, delayed the appearance of the *ſcarlet efflorescence*, as well as the *miliary eruptions*; the matter of which, inſtead of being thrown out on the ſkin, was repelled to the *viſcera*, where it excited thoſe profuſe excretions. *Theſe* therefore ſhould be checked with ſtypticks, bliſters, hot bricks laid on each ſide of the legs, and gentle anodynes; and when this point was gained, the ſcarlet and miliary appearances ſoon came into view; though, perhaps, the ſkin might not now be ſo overſpread with them, as if ſuch irregular evacuations had not preceded.

On another occaſion, I have ſaid, that the belly is commonly bound in *quinſies*, and it is alſo rare that a vomiting attends; but in the very uncommon and complicated diſtemper we ſpeak of, when various *miaſmata* ſeemed to have been involved and combined with each other, *that* order which uſually takes place in one ſimple diſeaſe, was often perverted in this *epidemick*; which was confined moſtly to ſuch ſubjects, as were under fifteen years of age; but

but even the oldeſt who ſickened at this time, ſeldom eſcaped without ſuffering more or leſs from a *quinſy*; and ſome of them were dangerouſly ill of that complaint; as they had it with all the uſual concomitants, which are peculiar to *it* alone, but without the *ſcarlet* or *miliary* eruptions.

In a few patients, to ſo great a degree did theſe two latter ſymptoms overſpread the external ſurface, that the diſcharge from it was as plentiful and fetid, as uſually happens in the *confluent ſmall pox*. And when the ſick were on the recovery, flakes of the *cuticula* pealed off, as large as the pages of an octavo volume; which had all the appearances of very fine lawn, and in which the perſpiratory paſſages, exactly reſembled the interſtices, between the threads of that ſort of manufacture; ſo that they were by no means ſo minute as *Lewenhoek* deſcribes them, being perceptible to the naked eye. However, this remark is not meant to invalidate the truth of his obſervations in general, as to their being extremely ſmall; though it ſeems altogether incredible, how, by any *apparatus* he could contrive, it were poſſible for him to calculate the number of pores to be above 40,000, in a ſpace which a grain of ſand, whoſe diameter did not equal the 100th part of an inch, would cover. I quote from my memory; though, if I remember rightly, he reckons 45,000 perſpiratory paſſages, in the above very minute circumference.

The laſt puſh this formidable diſeaſe made, was on the nervous ſyſtem. For when all the other ſymptoms were on the decline, and the patients flattered themſelves with the hopes of being ſoon well, very many were at once ſeized with ſuch acute pains in all their limbs, as rendered them intirely helpleſs; nor could they enjoy any ſleep ſo long as theſe pains continued. It was likewiſe

ſingular, that the parts affected ſwelled ſuddenly; and in many they aſſumed the appearances of the *ſcarlet fever* or of a much deeper inflammation, and were attended with a burning heat. During this diſtreſſing ſituation, the patients were miſerable in the higheſt degree; as being apprehenſive of ſpeedy death, or at beſt, of remaining cripples for life. But happily for them, and contrary to all expectations, theſe tormenting ſymptoms gradually abated, in many patients, in the ſpace of a day and night; and in thoſe who were worſt, but little of them remained after forty eight hours. This ſurpriſing *metaſtaſis* alarmed me greatly at firſt; and therefore I had recourſe to diaphoreticks mixt with anodynes; ſuitable embrocations, as I thought, being likewiſe applied to the affected parts, with the good effects of which I was well pleaſed, as believing the ſpeedy relief which was given, aroſe from my having conſidered the complaint in a right view. But hearing of many others, who being ſeized with the like ſymptom, recovered of it without any medical aſſiſtance, I was the leſs ſurprized at it for the future; and only recommended warmth and the uſe of ſack whey to the patients; which being complied with, the pains ceaſed within the times mentioned above.

The heat of the *air* being greater and more uniform in April, the ſpring of the ſolids is weakened in proportion, and the fluids alſo loſe ſtill more of their denſity, which, indeed, began to be diminiſhed in the preceding month, as already hath been ſaid; ſo that by the end of April we are affected nearly in the ſame way, as was deſcribed in the firſt ſection of this work; wherein the effects of the weather at the beginning of ſummer were recounted. And though diſtempers may ſtill imitate thoſe that appeared ſix weeks before, yet

yet it will eaſily be perceived, that they partake but little of an inflammatory diſpoſition; for all the ſymptoms will be milder, and only ſome ſtreaks of *viſcid coagulable lymph* will now be ſeen on the blood, even of ſtrong perſons during fevers; and ſtill leſs of it appeared in March than in February. And ſo changed are our conſtitutions towards the end of April, provided the ſeaſon be but regularly warm, that fevers prove either *quotidians* or *tertians* at once; and they oftentimes are attended with *bilious* diſcharges both ways. This difference in the *types* of *fevers*, muſt certainly be owing to the *change* that is wrought on our bodies, by the relaxing heat of the weather; which, as it were, unbraces the ſolids, increaſes their irritability and diminiſhes the *gravity* and *momentum* of the blood. For the above evacuations could ſcarcely have been made, unleſs from the greater weakneſs of the veſſels, which permitted plentiful ſecretions to be made from them, when any unnatural run of the fluids is forced on the *viſcera*, by a *morbifick conſtriction* of the external habit.

Thoſe who have ſwelled ſpleens or the jaundice; pale girls and women alſo who do not menſtruate ſufficiently, or thoſe in whom *that diſcharge* is wholly intercepted, are liable to *hemorrhages from the noſe or lungs*, more eſpecially during fevers. And, ſometimes, ſuch quantities of blood are diſcharged by vomiting, as immediately ſink the patient. But ſhould they even ſurvive one attack of this ſort, returns of it are likely to happen at longer or ſhorter intervals of time, and prove fatal at laſt to the patients, unleſs the diſorder can be prevented, by removing its remote cauſe and ſtrengt ening the conſtitution. But theſe things are not always ſo much in our power as might be wiſhed. For, however well gentlemen of the pro-

 feſſion,

ſeſſion, might mean, by preſcribing preventive medicines againſt returns of this complaint, yet I never found them fully to anſwer the purpoſe, whether it might be from their inſufficiency to avert the evil, or rather that the patients were careleſs, I will not ſay. But as to myſelf, I have hitherto been unſucceſsful in all attempts of this ſort.

At this ſeaſon, the teeth commonly begin to ſhoot even in very young children; who then become liable to fevers, with either large watery, green or pale and curdled ſtools; and weakly adults alſo, have *ſerous*, *bilious*, and acrid diſcharges of a *verdigris colour* in fevers and colicks. Theſe are ſigns of an increaſed *laxneſs* and *irritability* in the ſolids and *nervous ſyſtem*, as well as of attenuation in the fluids; and that the latter is true, will further appear when blood is taken away, from the *grume* floating high on the *ſerum* in a thin looſe maſs; the *ſerum* likewiſe being augmented in quantity, according as the *red part* diminiſhes. And that the *fluids* are now more determined towards the outer ſurface, than they were during the cold weather, is plain from the increaſe of *perſpiration*, the dimunition of the urine and frequent appearances of the *eſſera*, *ring-worms* and other *eruptive diſorders*. Nevertheleſs ſhould the weather continue cool, *inflammatory diſeaſes* will ſtill appear, till the ſeaſon becomes regularly warm; whether *this* happens ſooner or later.

It was ſaid that the weather had a greater influence on us, than all other agents; and certainly, if the conſtitutions of a whole people are made to undergo *temporary changes* either with reſpect to ſtricture or laxity at particular ſeaſons, it ſeems wholly owing to the *temperament* of *body* we acquire at thoſe times, that *morbifick* cauſes have ſo various

effects

effects on us. *This* is the true reaſon, why certain complaints ſeem as it were proper to particular ſeaſons, in *which* the weather commonly reduces us to ſuch a ſtate, that very different events ſhall enſue from the ſame cauſe, than would have been at another time of the year, when our conſtitutions were in a different condition.

Therefore, it is wholly to be imputed, to the *alterations our bodies are made to undergo* from the weather, in the ſeveral ſeaſons of the year, that we are liable to ſuch a diverſity of diſtempers; many of which would never have been known, did our climate continue in the ſame uniform and invaried ſtate, as to its *temperature* and *ſenſible qualities*; for then diſeaſes would be either few, or have ſomething in common with each other at all times. And did not our *conſtitutions* alter with the weather, it ſurely would be to little purpoſe, that we adviſed *valetudinarians* to change their climate for the recovery of health, which often is not to be attained, but by theſe means.

It may be obſerved that thoſe complaints which depend on a *weakened tone of the ſolids*, and *lax conſiſtence* in the blood, ſeldom appear during the winter, but only when the weather is warm, more eſpecially if it be moiſt; for *theſe two qualities of the air* really bring about *that* ſort of conſtitution in us. And as this habit begins with the ſummer, we conſequently ſee, that *intermitting fevers* ſet in then, and are attended with great *debility*, *profuſe ſweats*, *vomitings* and *purgings*. And ſuch diſeaſes become ſtill more common as the warm ſeaſon advances, and relaxes the ſolids and colliquates the fluids yet more. But they are by far moſt frequent in the autumn, when the like habit of body ſtill prevails; the weather then being not only warm but changeable; and therefore, whatever harmony

might have before ſubſiſted between the *nervous* and *ſanguinous ſyſtem*, may now be the more eaſily diſconcerted. Fevers with great languor, profuſe ſweats and other exceſſive diſcharges, appear in July, Auguſt and September, when our fibres are exceedingly lax, and the blood not only greatly attenuated, but tainted, perhaps, with ſome degree of acrimony. But as in the two latter months, the winds often ſhift to the north or eaſt, with an increaſed coldneſs in the *air* for a few hours after a thunder-ſhower, the ſpaſmodick conſtriction of the external habit that always preceedes a fever, will then be more ſenſibly diſtinguiſhed, but which was not ſo perceptible during the ſteadily warm weather, except in thoſe who had *quartans* which probably commenced in the preceding autumn or winter, and which having run their courſes by midſummer, the patients had relapſed in July or earlier, according as the ſhowery ſeaſon ſet in ſooner or later; ſo that during theſe abatements of heat in the weather, *quotidian* and *tertian intermittents* will attack with more or leſs of a ſhivering.

Diſeaſes of a mixt kind, or between the inflammatory and intermitting, are ſeen in October and November, and alſo in March and April; at which times our conſtitutions are as it were in a middling ſtate with regard to tenſity or laxity. In winter again when the weather is clear and cold, our ſolids being then ſpringy and tenſe, and the blood more compact, intermitting fevers are ſeldom ſeen, having given place to others of quite a contrary nature, unleſs the ſeaſon be unſeaſonably warm. Hence it appears, that the ſtrength or weakneſs of our bodies, keeps pace with the weather; and that they do not paſs to either extreme all at once, but rather by degrees, or according as the *air* changes in its temperature, at different ſeaſons of the year. So

that,

that, theſe do not ſucceed each other ſuddenly but as it were with a gradual progreſs, our conſtitutions conforming thereto, whether the tranſition be from cold to warm or the contrary. The truth of this reaſoning, every obſervant perſon may perceive, by an increaſe or abatement in his own ſtrength, and the difference that of courſe happens in the diſeaſes of the ſeveral ſeaſons.

Though one day of bad weather may occaſion various complaints, yet, before any *popular* diſeaſe can take place (ſetting aſide thoſe that are contagious, ſome of which when imported hither appear indifferently at all ſeaſons), the air for a conſiderable continuance of time, muſt have been of ſome certain *temperature* and quality, or nearly ſo. But of whatever nature the *epidemick* may be that enſues, *this* will ſcarcely ſhew itſelf till the weather alters, and diſturbs *that ſettled order*, which took place during the former ſeaſon, provided *this* had been but fair; for if *it* were wet, overcaſt or windy, diſorders muſt then have been frequent. But it does not always happen, that the epidemick ſhall appear immediately after ſuch a change in the air, for it may require ſome days to diſconcert that *equilibrium*, which before ſubſiſted between the ſolids and fluids, and in the regularity of *ſecretion* and *excretion* depending thereon, ſo as to produce a diſeaſe. And as *theſe* Effects are brought about ſooner or later, according as conſtitutions differ, and people happen to be more or leſs expoſed to the weather, ſo may *they* ſicken either in great numbers nearly at the ſame time, or in a more ſcattering manner one after another; though then a ſtriking ſimilarity may in many reſpects, be obſerved in moſt caſes.

When the ſeaſon is very inconſtant, a variety of complaints and confuſion in their ſymptoms will enſue;

enſue; according as various habits may be acted upon by ſuch a mixture of impreſſions; and then the obſervation of *Hippocrates* is likely to be verified, 'that all diſeaſes happen at all ſeaſons.'

If the weather had been ſultry for ſome time, with a ſouth or weſt wind, and *this* ſhifts to the north or eaſt, ſo as to cauſe the *air* to become fifteen or twenty degrees cooler, fevers will immediately aſſume a new form, even during the ſummer. For inſtead of thoſe clammy melting ſweats, and precipitous diſcharges that were made both upwards and downwards in diſeaſes before this change, the ſkin will all at once become hot and dry; the *vomitings* and *purgings* alſo ceaſing; ſo that in place of the former ſigns of exceeding laxity and dilatation of the veſſels, a coſtive ſtate, with either a pain in the ſide and difficulty in breathing, a cough, *quinſy* or *rheumatiſm* may enſue in thoſe who ſickened before this alteration happened in the ſtate of the atmoſphere, as well as in theſe who now may be ſeized with fevers. Theſe ſeveral circumſtances denote an augmented conſtriction in the *vaſcular ſyſtem*, owing to the *tonick* effects of an increaſed coldneſs in the air.

The reverſe of the above will fall out on a change from cold and dry, to damp ſultry and calm weather in the winter. For ſuch a condition of the *air*, not only acts as a warm bath, fomenting our bodies, but we at the ſame time imbibe much moiſture from without, whereby the ſolids are not only more relaxed, but the fluids alſo are much diluted. The warm humid *atmoſphere* likewiſe that ſurrounds our bodies, and which ariſes from the heat we generate, conſtantly paſſing from the interhal towards the external parts in order to be diſcharged by the pores of the ſkin, as well as the matter of *perſpiration*, are then detained inſtead of

of their being diſcharged from the body as they ought to be.

At ſuch a ſeaſon likewiſe children and weakly adults, ſhall have either vomitings or purgings in fevers; *ſerous* enlargements of the *uvula* and *tonſils*; *cutaneous eruptions*, as well as other ſigns of *relaxation* in the outward habit, may alſo be now frequent. Even a few warm days in December and January, oftentimes bring on relapſes into intermitting fevers, together with vomitings and purgings in thoſe who had not been well braced, after having ſuffered from thoſe diſorders in the preceding autumn; though diſcharges of *this* ſort, unleſs from the *atonia* or *flaccidity* which is produced by ſuch unſeaſonably warm weather, are not common to winter diſeaſes. I have alſo obſerved in the courſe of my practice, that not only the above relapſes happen, but likewiſe, that other diſtempers moſt generally invade during ſuch untimely intervals of heat at this ſeaſon; in particular the *gout* and *rheumatiſm*. How variable our climate is with reſpect to heat and cold in the winter months, will plainly appear from the general table.

Every ſeaſon of the year is not equally healthy or ſickly to all ages and conſtitutions; for when the air becomes warm and moiſt at the beginning of ſummer, children ſuffer firſt, and other delicate people may paſs their time but indifferently, during that ſeaſon and throughout the autumn, unleſs they be ſupported with *tonick* medicines, the *cold bath* and ſuitable *nouriſhment* and drink. But as all perſons are weakened in ſome degree, by the continued heat of the ſummer, ſo, ſhould even the ſtrongeſt ſicken at that ſeaſon, their complaints will be nearly the ſame with thoſe, that infants were affected with at the firſt ſetting in of the hot weather. On the other hand, thoſe who are ſubject to the *aſthma*, *gout*,

gout, or *rheumatiſm*, and aged people alſo, commonly enjoy better health then; a warm ſeaſon being for the moſt part favourable to them.

It was ſaid above, that children were the firſt who ſickened at the ſetting in of the ſummer; but it likewiſe ſhould be obſerved, that they generally enjoy better health afterward, ſo long as the weather continues ſteadily warm. This undoubtedly muſt be owing to the ſolids and fluids ſo aptly conforming themſelves to each other by degrees, that the circulation together with ſecretion and excretion proceed in a pretty regular manner, whereby health is maintained.

Thoſe who are much in years, and they who have been weakened by *chronical* diſorders, generally die in the *autumn*, or at the beginning of *winter*; whereas they who had been debilitated by frequent returns of intermitting fevers regain ſtrength, as the latter ſeaſon advances; but then, *gouty*, *rheumatick* and *aſthmatick* ſubjects ſuffer in their turns. It is indeed true, that people of very delicate habits, ſeldom expoſe themſelves much abroad when the weather is rigorouſly cold; but the robuſt ought then to be much on their guard; for the diſeaſes that are brought on by the indiſcreet uſe of athletick exerciſes, are generally very acute. And with reſpect to youths, they are moſt in danger in the ſpring.

I have further remarked, that the returns of periodical diſorders, and the ſymptoms of thoſe that are of the more continued ſort, conform in a good meaſure, in their times of attacking or exacerbation, with ſuch parts of the twenty four hours, as come neareſt to the temperature of thoſe ſeaſons, to which theſe ſeveral complaints ſeem, as it were, properly to belong. Thus, if the *morning* be ſuppoſed the ſpring, *noon* the ſummer, *evening* the autumn

tumn and *night* the winter of the day, as the parallel will run pretty nearly when the weather is ſettled, vernal diſorders ought to commence or be increaſed in the forenoon, and abate towards the evening or in the forepart of the night; *thoſe* of the ſummer ſhould invade towards noon and decline in the evening; but at whatever time they return, their ſymptoms will certainly be heightened in the middle of the day. On the other hand, *autumnal* diſorders ſhould attack or be aggravated about four or five o'clock in the afternoon, and ſuch diſtempers as are common to the winter, either come on or are much increaſed in violence at the beginning of the night; and they remit or go off towards the morning; continuing thus moderate till the next evening, unleſs the weather be very cold. The diſorders of the firſt period, are not ſo certain in their onſets and exaſperations; but for the moſt part a ſtriking agreement will often be perceived even in them.

Excepting the *plica* and a few of ſuch oddities, the people in this province are liable to all the diſorders, that are to be found elſewhere, or which can ariſe in conſtitutions, that are differently modified in the various ſeaſons of the year. But, as the endemick diſeaſes of *South Carolina* are common to other warm climates, it will be ſufficient for my purpoſe, barely to name thoſe, to which our inhabitants are, as it were, conſtitutionally, moſt liable. In general, *they* are obnoxious to all ſuch complaints, as depend on lax and very irritable fibres, and a colliquated, and perhaps an acrid ſtate of the fluids; from which ſort of conſtitution, no one perſon, had he been ever ſo robuſt before, will be wholly exempted at ſome times of the year; and very many people do not recover of it afterward. The nervous ſyſtem, therefore, acquiring ſome degree

of

of irritability ſpaſms of the arteries and other membranous parts are eaſily brought on from trivial cauſes. The ſmall veſſels which are more remote from the heart, being moſt liable to *morbifick influences*, they very generally are firſt affected with ſpaſmodick conſtrictions. And whether the *nervous* or *ſanguiferous ſyſtem*, be primarily diſordered by any thing that has an irritating power, (though probably the former moſt commonly is firſt affected) ſo great is the ſympathy between them, that whenever one ſuffers in this way, the other muſt alſo be diſturbed by a conſent of parts. Hence *convulſions* are common in the fevers of young ſubjects; as *ſuffocations*, *cataleptick ſymptoms* or convulſions likewiſe are to *hyſterical* and *hypochondriacal* perſons; theſe *latter* diſorders being very frequent here. But we have few *idiopathick epilepſies*. The *opiſthotonos* and *tetanus* appear amongſt us at all ſeaſons, more eſpecially from wounds or ulcers of the tendinous parts; and to the former of which, new born infants are very liable; nor have I known more than one patient out of many hundreds of them recovered from it.

Except during the winter, various ſorts of intermitting fevers are common at all times; and different kinds of pain ſometimes attack one part and again another; which, as they return and go off nearly at the ſame hours daily, or every ſecond or third day, ought to be treated as intermittents; they being, indeed, local fevers, though the pulſe may only be ſomewhat hard, but not quicker or but a little more ſo than it is in health. Many people are liable to a *vertigo*, owing to the great ſenſibility of the nervous ſyſtem in thoſe who are ſubject to that diſorder, and in part, perhaps, to the irritation of an acid acrimony in the firſt paſſages; ſuch perſons, almoſt always abounding therewith

with at ſuch times, as they are in danger of *apoplexies* or *convulſions*.

Digeſtion being impaired by the great and continued heat of the weather, an acrimony of the *acetous* kind prevails to ſuch a degree amongſt us, that very few have eſcaped it; and many are habitually obnoxious to it; whence various diſorders enſue in the bowels, which oftentimes have alarming and more extended effects. Beſides, *this acrimony* having paſſed to the blood, it there produces very many complaints, the true cauſe of which is but little ſuſpected by many.

The *fluor albus*, profuſe *flowings*, as alſo obſtructions of the *lochia* and *menſes* frequently occur; and relaxations of the *uterine ligaments* are not uncommon.

In fevers the head ſuffers in a remarkable manner; and many perſons are daily afflicted with more or leſs pain in that part; owing probably, to ſome degree of *ſpaſm* acting on the extreme veſſels; for ſuch people ſeldom have a natural warmth in their hands, much leſs in their legs and feet.

From a want of excitement in the nervous ſyſtem, the *atonia* of the ſanguiferous veſſels and ſmall *momentum* of the blood, *congeſtions* of the fluids, or obſtructions in the *viſcera*, more eſpecially the ſpleen, are frequent towards the end of ſummer and in the autumn. General or local *dropſies*, as well as *hernias*, are no where more common; and few adults have eſcaped the *piles*; ſome people being daily more or leſs troubled with them.

Our conſtitutions, being at ſome ſeaſons reduced to *that* ſtate which is called *ſcorbutick*, and a taint thereof, probably, remaining afterward, duſky or purple coloured ſpots, ſometimes appear. But more frequently, the *gums* firſt become *ſpongy*, and then are ſoon deſtroyed; ſo that the ſockets of the teeth

teeth being now expoſed to the *air*, theſe inſtruments of maſtication are loſt. It is likewiſe common both among children and grown perſons, to have their teeth corroded even with the gums; which happens moſtly to *thoſe* that ſtand in the forepart of the upper jaw. And the tooth-ache alſo being a very frequent complaint, it helps much to deprive many people of the means of chewing.

The *rheumatiſm* may be deemed one of our *periodical* diſeaſes; and perhaps the *gout* attacks more people for the number in Charles Town, and certainly returns oftener than in any other place.

Whatever be the nature of *that* humour which communicates the *lues venerea*; the *yaws* and *lame diſtemper*, ſeem owing to ſomewhat not very diſſimilar to it; as theſe three diſorders terminate nearly in the ſame manner, when they are not properly managed, or are left to take their own courſes. And being alſo curable almoſt in the ſame way, they probably may be conſidered, as different ſpecies of the ſame *genus*.



F I N I S.